OCTOBER, 1958 2s. 3d.

Personnel Management & Methods

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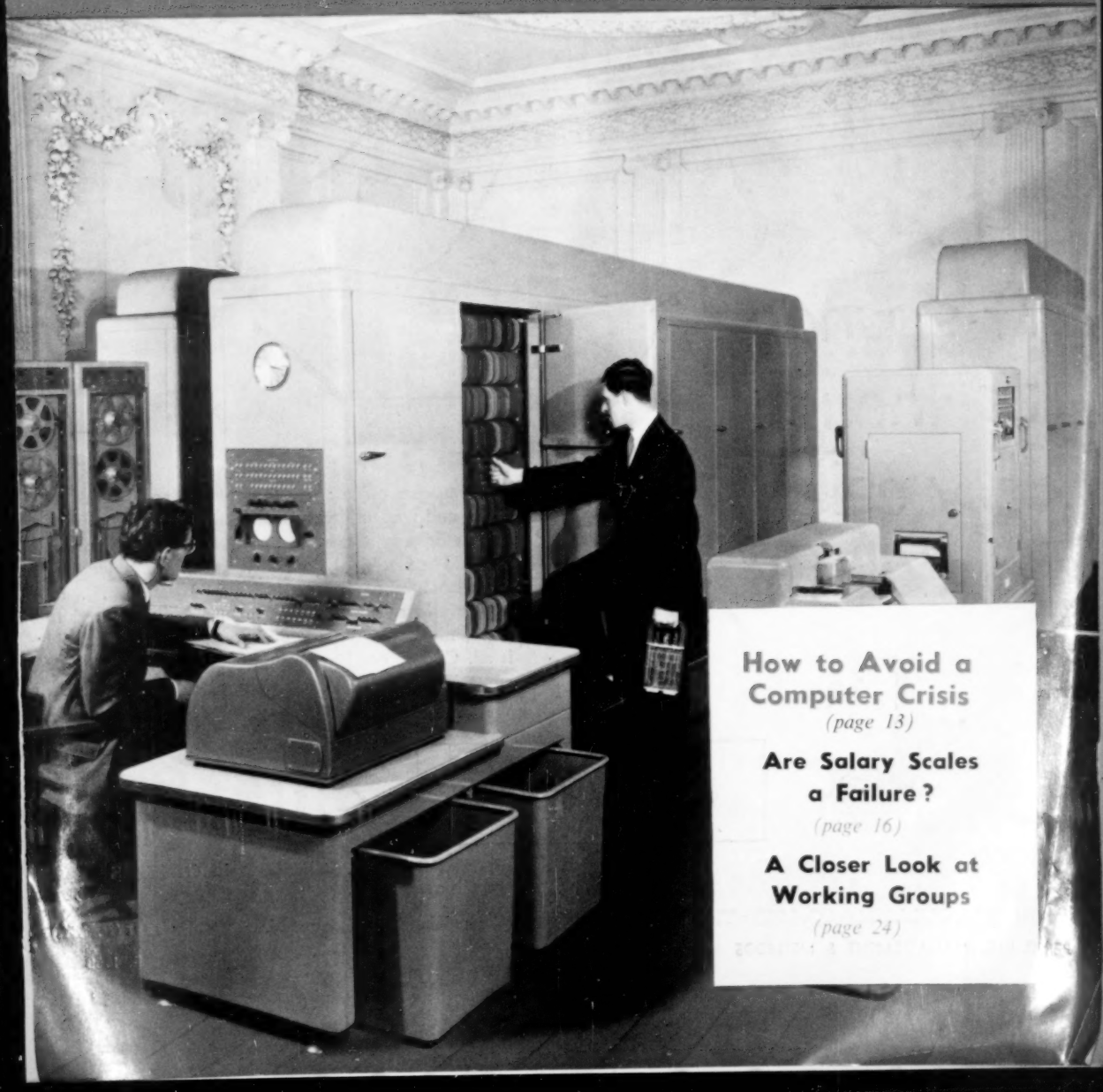

How to Avoid a Computer Crisis
(page 13)

Are Salary Scales a Failure?
(page 16)

A Closer Look at Working Groups
(page 24)

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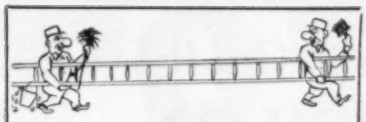

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OCTOBER 1958

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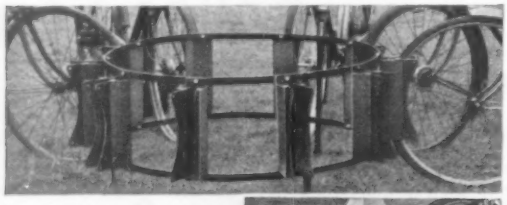

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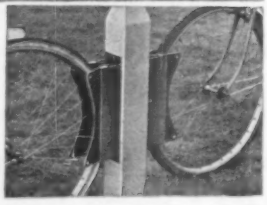

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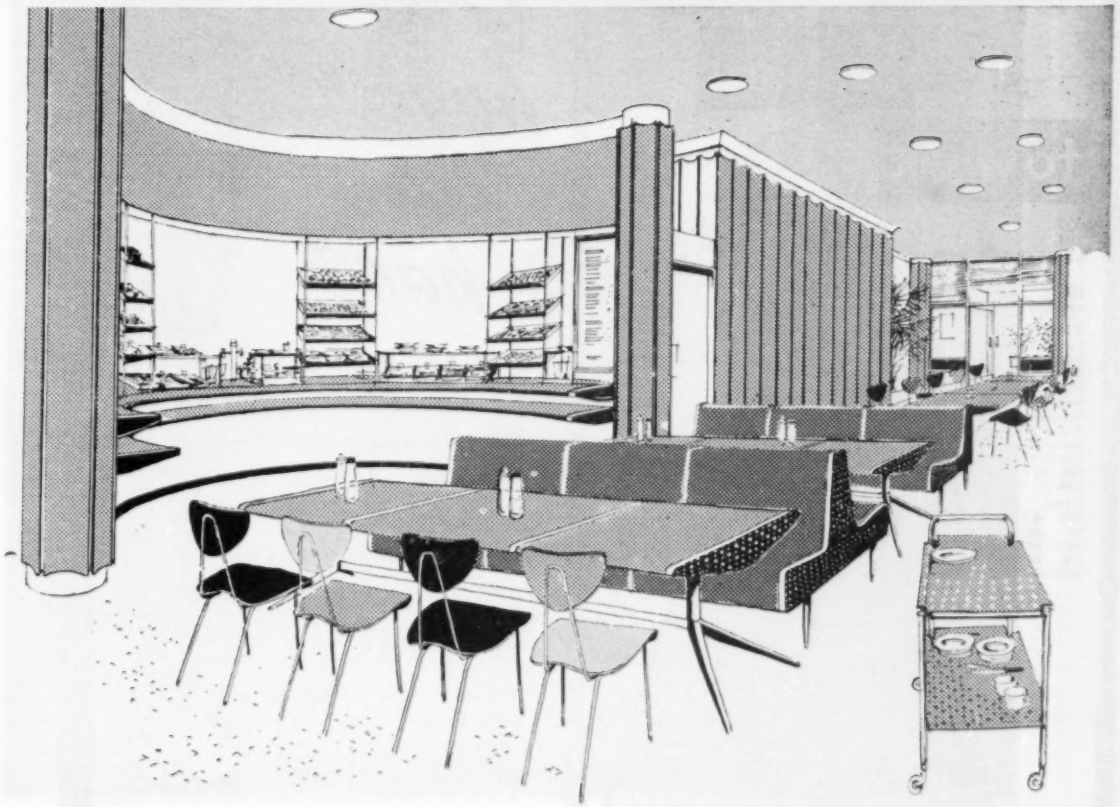

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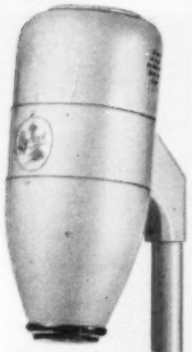

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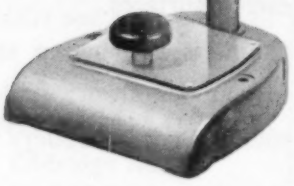

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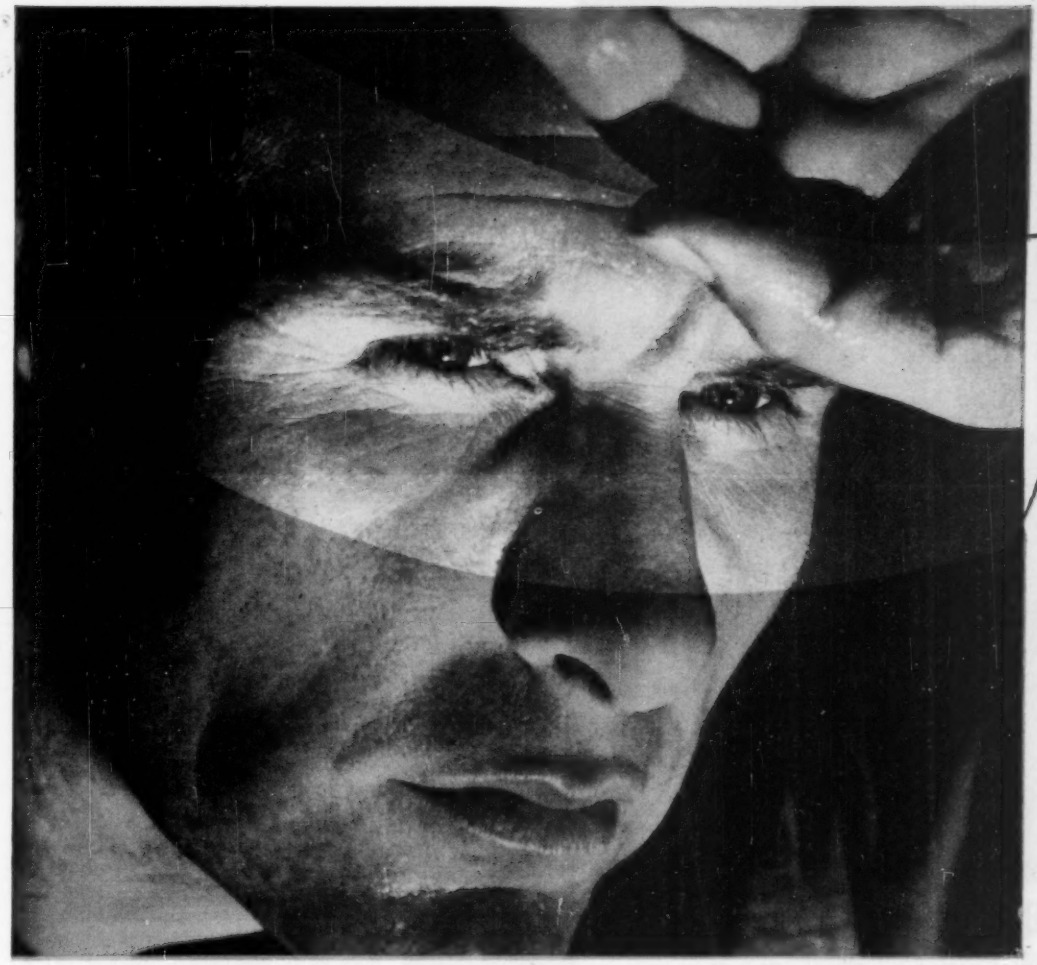

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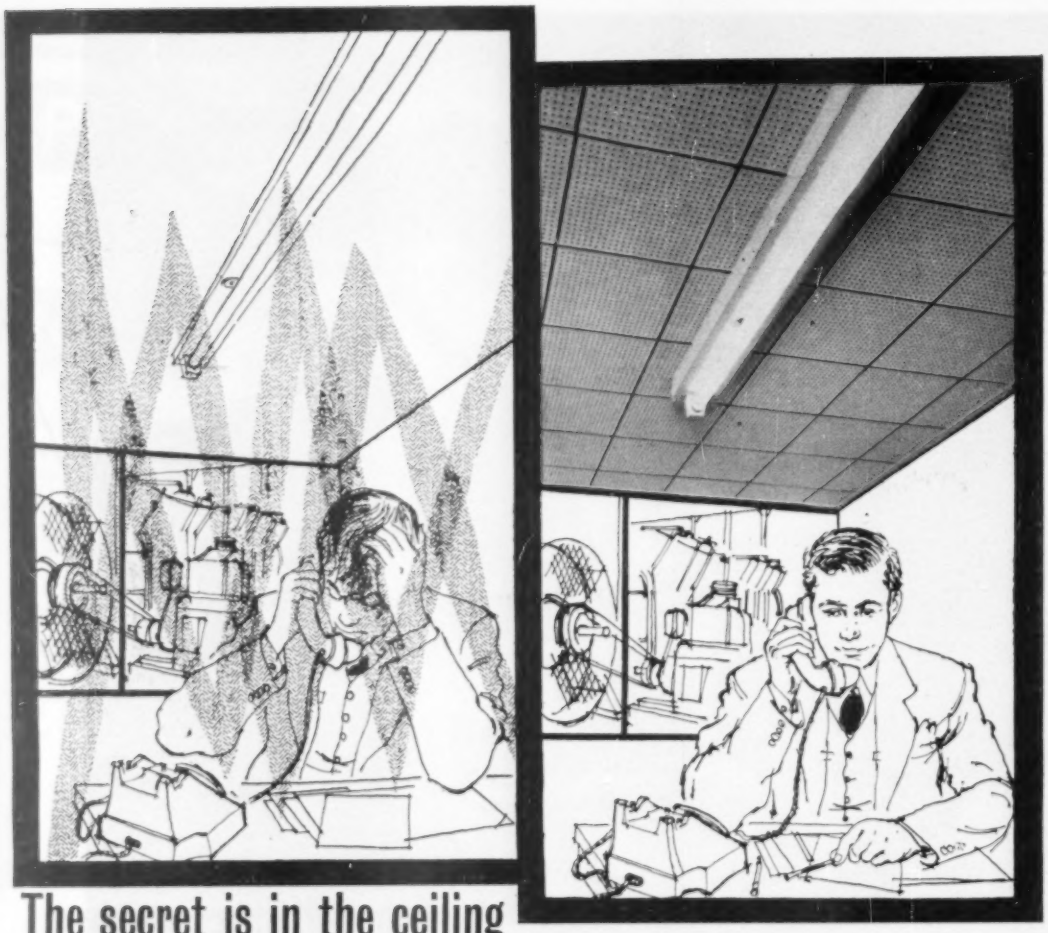

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FM

Point Counter Point

Labour Exchanges Climb the Social Scale

LAST month we carried a feature about the appearance on our industrial scene of executive selection consultants, and now it seems these gentlemen are being faced with real competition from none other than our dear old friend, the Ministry of Labour itself. Recent news issued by the Ministry about the 48 Professional and Executive Registers, with which it replaced its three Appointments Offices in April, 1957, suggests that these "Special Local Offices" (to give the Registers their other name) are doing brisk business.

The social ice, it seems, is breaking up, and now executives seeking to improve their positions (i.e. get a better job) are no longer shrinking in unspoken horror from the thought of actually going to a labour exchange to see what's doing. The *Birmingham Post*, for example, reports that, in Birmingham, Coventry, Wolverhampton and Hanley which each have a Register, there is a total of 1,000 names on the books, of whom two-thirds are already in executive jobs but want promotion elsewhere.

The register is available to all men and women who are qualified in any of a wide range of professions or experienced in managerial or senior executive work, and to those suitable for management trainee posts in industry and commerce. Ex-officers of H.M. Forces, irrespective of their qualifications, are accepted on the Register and, indeed, are among the Ministry's best customers.

The machinations of class are a never-failing source of interest and distraction to the island race. For some time now industrial leaders have been hammering away at the theme that we must come to look upon business as a profession just as respectable as the Church or the Law or the Navy or being a squire. The idea has not exactly caught on like wildfire but it is gradually gaining ground and the Professional and Executive Registers make a straw in the wind. Maybe one day they will be called Executive Labour Exchanges and no one will care tuppence.

But to revert to executive selection consultants who would no doubt wish to point out that they act for the employer while the Registers act chiefly for the employee. True, but in the final analysis both submit short-lists for vacancies after careful interviewing. Who knows but one of these days some astute Chancellor of the Exchequer might get the bright idea of charging fees for services rendered?

A Lifetime of People

ONE of the best-known personnel managers in the Midlands retired a few weeks ago after 44 years with the Dunlop group. He is Mr. W. G. M. (Bill) Goff, personnel manager at Fort Dunlop and indefatigable social worker.

Personnel Manager Goff—After 44 years, 20 years ahead.

Fort Dunlop came into being in 1916 and Bill Goff paid its first weekly wages bill which amounted to £8 14s. 6d; it has since grown to £118,000. After ten years there, he went for five years in charge of the wages department of the Charles Macintosh Group which Dunlop took over in 1926. He returned to the Fort in 1931 and five years later was appointed management secretary. He became personnel manager in 1945 and under him the personnel department developed into a large, complex, but very human structure. Members of the

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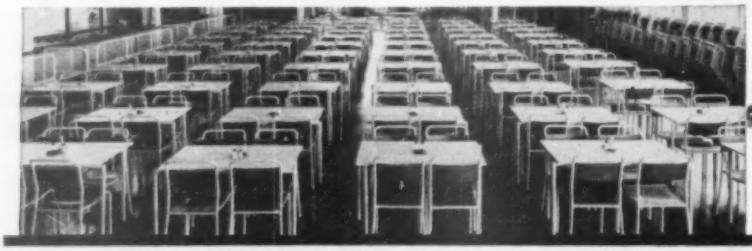

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Point Counter Point

department, which looks after 3,500 workpeople, believe that they are twenty years ahead of most industrial plants.

Among other things, Mr. Goff is a Rotarian, vice-president of the Dunlop Division of the St. John's Ambulance Brigade and a member of hospital management groups and committees. In addition he is a keen churchman and started the first local Sunday School in the canteen at Fort Dunlop. But despite all these good works, he remains the most human of men—friendly, natural and broad-minded. He is, in fact, the sort of man most people would have in mind if they were looking for a "personnel manager type".

His successor, Mr. H. S. Briers, also comes into the "good all-rounder" class. His last post, before his promotion to the personnel office, was stores superintendent. He joined Dunlop in 1915, at the company's Nottingham depot, and subsequently held a variety of appointments in Manchester, Leicester, Southampton and Bristol. During the Second World War he served in the R.A.O.C. as Lieut. Colonel.

Manners Maketh Business

A MOST interesting and timely booklet, called *Appointment at 10.30*, has been published by the Industrial Welfare Society. It is, in brief, a plea for better manners in business and industry and deals in the main with the reception of visitors and courtesy and efficiency in taking telephone messages and writing letters.

Appointment at 10.30 was written by Miss Winifred McCullough who is already well-known to industry through her efforts to improve the standard of catering in the factory and office. Typically, she speaks her mind but all her suggestions are constructive and marked with what for the want of a better term we can only call "sound common sense." She aims at improving the hospitality techniques not only of secretaries, telephonists, receptionists, doorkeepers and clerks but of the boss himself.

Here is what she has to say about reception techniques in the personnel department.

"Sit down and fill in this form" is a very cold welcome, especially if the light is bad, the pen scratchy, the ink blobby and the form printed on highly absorbent paper. Most people need help with a form and many want to talk a bit before they embark on one. . . .

. . . Where there are no vacancies for the person applying, an honest "No" must be said. A suggestion of another place to try or of another sort of work with better chances can be helpful. If the factory is a long walk from the bus stop, the offer of a cup of tea, a short rest and other amenities is often a real kindness to the unsuccessful applicant . . .

. . . There are other considerations, however, for personnel of higher grades:

1. The applicant may not wish to be seen by others applying for the same job.

". . . may not wish to be seen by others . . ." One of the many witty illustrations by Christine Dixon.

2. He may have asked for leave of absence to keep the appointment and cannot afford to wait very long.

3. He may be nervous: a brusque clerk, a long wait, a baffling form will make him much harder to "draw out" during his interview.

It will save everyone's time if the applicant is put at his ease from the first moment. Provide somewhere for his outer clothes. On a hot day offer a wash and a drink of water.

Nor are we trying to be funny when we say that one virtue of this publication is its brevity. It can be read and digested in well under an hour (quite a rare thing for printed matter these days) and is worth every penny of the 3s. 6d. at which it is priced.

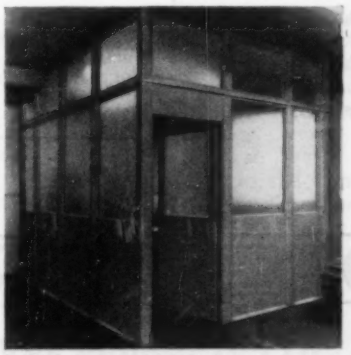
Are You Biased?

IF you had a vacancy for a job that required patience, tact, and, above all, an even temper, would you employ a person with red hair? Put another way, do you think that a receding chin indicates lack of character, or that a person with thin lips is necessarily mean? This is not a psychological test, and there is no score for answering any of the questions. I have raised them simply because each is fairly representative of the minor (sometimes major) prejudices which each of us carries around with him.

We may not know where they came from, but we can occasionally see them creeping into our working relations with others. On page 21, this issue, we publish a letter from a research chemist who has found that a bias in his own company, probably no better founded than any of those above, has affected his own chances of promotion.

Discussion Leader, who offers this example of managerial prejudice for your consideration, has also turned up some interesting material based on investigations into the truth of certain widely held conceptions.

It was shown, for example, "that blondes and brunettes do not have the traits often ascribed to them (blondes — changeable, variety-loving, optimistic, speculative; brunettes—consistent, steady, dependable, conservative). One hundred judges were asked to think of two blondes and two brunettes of their acquaintance and rate them according to these traits. As may



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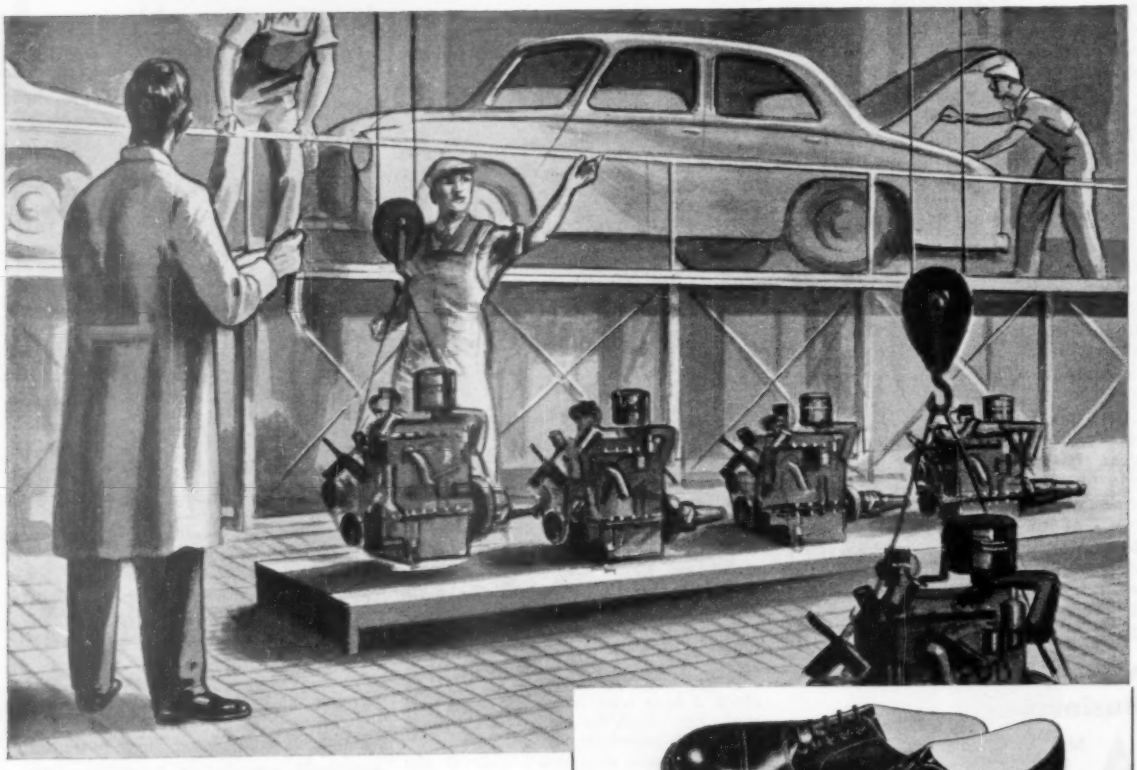
DANGER IN THE WORKS



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be expected, blondes were shown to possess brunette traits and vice versa.

"Another investigator close-shaved the hair of some college students. Other students could not distinguish their photographs from those of real criminals.

"People admitted that appearance greatly affected their judgement. They were favourably impressed by 'good looking' people (girls with good figures and pretty faces, athletic, healthy-looking men). A sizeable group disliked 'excessive good looks.' They disliked 'arty' dress, Teddy boy uniform, dangling jewellery on women, two-inch crêpe soles to shoes, men with beards. They disliked effeminate men, masculine women, 'excessive' make-up, sateen blouses, girls with long red finger nails and people who use cigarette holders. The general picture is unmistakeable — most of the people interviewed favoured conventional-looking people like themselves, who put the same emphasis on personnel hygiene, grooming, and appropriate dress as they did".

If you have anything to offer on the subject of prejudice as it affects your life at work, Discussion Leader would be pleased to hear from you.

The Broader View

FOR all the care and attention that is rightly given to the technical training of apprentices in industry, there is little endeavour to foster in the minds of these intelligent young people an awareness of their future responsibilities as operatives, technologists or as members of management.

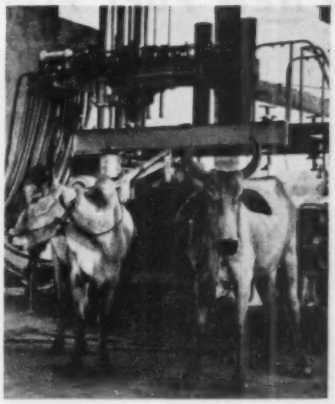
For nine years the Industrial Welfare Society has given to apprentices from all over the British Isles the opportunity to widen their outlook on the world of work through annual residential conferences at Oxford.

The first conferences were so popular among apprentices and found so valuable by management in developing the capabilities of the boys, that for some years two consecutive conferences have been held in order to accommodate larger numbers. Indeed, in 1959, three consecutive four-day conferences will be held at Keble College, Oxford, at the beginning of the autumn.

The two 1958 conferences, from September 4 to 8 and from September 9 to 13, were attended by about 150 boys each, all between the ages of 19 and 22. The Society suggests to companies that at least two boys are sent together, as the companionship of someone else from the same organisation helps to combat the shyness that is natural at what is for most of them a novel event in unfamiliar surroundings.

A simple well-tried pattern is followed: straightforward talks by well-known people from industry and discussion in groups of about 15 boys. The groups are led mainly by men from industry who voluntarily give up their time to assist; individual boys are chosen to report back on their group's discussions to full sessions of the conference.

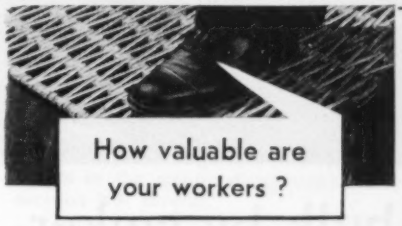
This year a talk on Britain's social, economic and industrial future opened the conferences, given at the first by Mr. Peter Runge, director, Tate & Lyle Ltd., and at the second by Sir Hugh Beaver, managing director, Arthur Guinness, Son & Co. Ltd., and president, Federation of British Industries.



Horns of Plenty?

Native superstition holds that these cows, wandering freely round a Birlec arc melting installation at Ashoka Cement Ltd., Dalmianagar, Bihar, India, embody the spirit of Lakshmi, the Goddess of Wealth. The furnace operator believes that it is a very favourable omen if one of the cows lies contentedly before the control panel whilst a charge melts—the steel might even be transmuted into gold.

THE EDITOR



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15P9 .....

A Computer Need Not Create a Personnel Crisis

Despite the sensational accounts in the Popular Press, the introduction of a computer does not mean wholesale sackings of clerical staff. On the other hand it will mean a chance of more interesting jobs for men now on routine work, as is shown by the case study described here

TO most managements the computer or "electronic brain" is still something remote and mysterious one reads about from time to time in the popular Press, but in a few years it is more than likely that in large firms anyway the computer will be commonplace. It is only about three years ago that the first model began operations in British industry and now there are 60 commercial computers at work in this country, and all the time demand and interest is snowballing.

Not unnaturally, the personnel department will ask what problems, if any, will arise if and when the management decides to introduce a computer into the works; especially in view of all the recent publicity about how these machines can do in ten minutes what it formerly took an army of clerks one whole week to perform. Such stories of course have been read by the people concerned and at once that bogy word "redundancy" crops up. An example of the fears that may well be generated occurred recently when it was decided to install a computer in a certain post office in the West Country. The local union branch (representing workers most of whom could not be sacked anyway) protested so vigorously that finally the computer was moved to a post office in another part of the country where feelings about it were not so strong.

This case underlines what trouble *can* crop up when a decision to install a computer is implemented and, in the long run, of course, such machines *will* reduce the need for office staff—that indeed has been one of the main reasons why some companies decided to buy a computer. In practice, however, the benefits of electronic installations have manifested themselves in other ways and rarely have people become redundant as a result of the purchase. On the contrary, appreciable numbers of clerical staff have been given the chance of more interesting and responsible work, while jobs have been found for the rest in other departments.

Fears, however, carry more powerfully than facts and it will be a wise management which, when it decides the moment has come for the computerisation of certain jobs, works out a realistic policy of putting their workpeople in the picture about what the decision will involve.

By ROBERT McKINNON

One management which faced this problem and tackled it intelligently is that of the Morgan Crucible Company at Battersea. This company, which makes crucibles, refractories, carbon and graphite products, radio components and furnace elements, was among the first to purchase and put into operation a medium-sized computer built specifically for routine office work. This was the *Hollerith Hec 4E* computer and it was delivered to the Battersea head office in November, 1956, since when it has been used for salaries, payroll and the preparation of customer statements. The next jobs planned for it are sales analyses and stores control, then production stock and then on to production control.

Once the decision to buy the computer was taken, the management right away took steps to inform the staff about it. In fact, a period of two years was to elapse between the placing of the order and the actual delivery of the computer and this time was used to change over to an intermediate basis the office procedures for salaries, payroll and sales analyses, bearing in mind that these procedures would meet the needs of both the breakdown method and the computer. This intermediate basis meant that any further changes to routines would be internal to the computer department and would have no further effect on external staff except, of course, to provide them with speedier and more complete information.

Also at the earliest possible moment the management decided to scotch the redundancy bogy, and all staff affected were told that it was not intended to declare any workers redundant as a result of acquiring an electronic computer. A small reduction in staff did in fact take place, but with one or two exceptions—people who did not want to take alternative work—the reduction was taken up by natural wastage.

Putting People in Picture

Through established channels of communication employees were kept informed of the project. Questions were encouraged and freely answered and, when the computer did arrive, visits of office and works clerical staff to the machine room were arranged. One of the most popular questions asked was "Why is it necessary to buy a computer?" The answer was that a computer worked so quickly that it supplied management with facts instead of history and this made for better management control which in turn would benefit everybody.

The policy of putting people in the picture did not stop at supervisory grades (as is so often the case these days when companies fall over backwards in their efforts to show workpeople that they are democratic) but was taken into the managerial ranks as well. The new techniques and possibilities opened up by the machine were explained to and discussed with senior executives.

It was pointed out that the main functions of a commercial computer were to provide reliable and timely information which, among other things, would enable the management to make forecasts with greater confidence and accuracy, and also to reveal exceptions to existing forecasts and so highlight the points at which management decisions would be needed. At the same time, the company drew up a training manual which described how the machine worked and what it could do. A copy was circulated to all directors and managers.

The experience of the Morgan Crucible Company has endorsed most strongly that, if a company has decided to install a computer, it should make that decision known right away. There is nothing to be gained by keeping it a secret; on the contrary such an attitude would only frighten and antagonise staff who have been doing the job by the old method and whose services will be vitally needed especially during the transition stage.

There is, of course, more to the installation of a computer than keeping staff informed. A primary consideration, for instance, is the siting and the layout of the machine and its auxiliary equipment. A well-appointed computer room is psychologically important. It should be of good height, clean and well ventilated and have stable foundations. There should be a well-regulated power supply with heat extraction ducting over the main unit and it should be possible to lay cables under the floor. There should also be a convenient and well-equipped maintenance room.

Training

Training of staff to operate the computer is obviously another important consideration, and it should be borne in mind that the installation is part of an integrated commercial system. The merit of a computer, then, is the contribution it can make to that system and this contribution consists not in the number of clerical staff it can replace but in its speed of calculation and its ability to make comparisons and deal with exceptions. Initial data has to be collected and processed before it can be fed into the machine, but its very speed of calculation provides a wide range of analyses which are of use because of their topicality. Clerical labour will still be needed to act upon this new type of information.

Training, then, is logically more concerned with what is needed before information can be fed into a computer, and this resolves into two distinct parts: the first and most important is the preparation ("programming" is the technical term) of data for the computer, and the second is the actual operation of the controls of the machine. Programming involves a series of mathematical instructions in coded form (the details of which need not be discussed here) which can be translated on to punched cards or punched tape, so obviously programmers—especially the head of the programming section—should be people of some mathematical ability. Learning how to operate the controls of a computer is, of course, a relatively simple job and should present no difficulty to staff already familiar with the operation of auxiliary machines used in punched card installations.

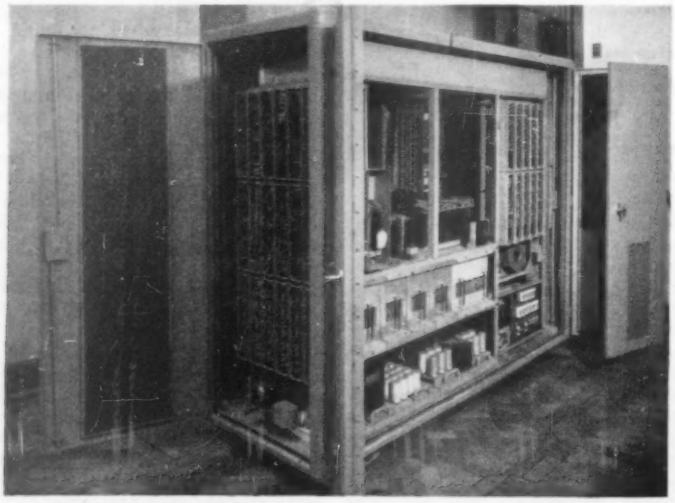
Morgan Crucible themselves selected senior machine room staff as trainees for operating the computer. They were given instruction by their own technician who was fully trained in electronic instrumentation and who had spent a considerable time with the manufacturers during the building of the machine. Practical experience on the running of the installation has, in fact, confirmed that good punched card machine operators are suitable for this purpose.

The preparation of the company's programmes is now carried out by a man who was previously one of the senior staff on the firm's Hollerith installations. It took about six months to train him thoroughly in programming techniques, but the results have fully justified the decision and the effort and have proved also that mathematical degrees, although valuable, are not absolutely essential for this work.

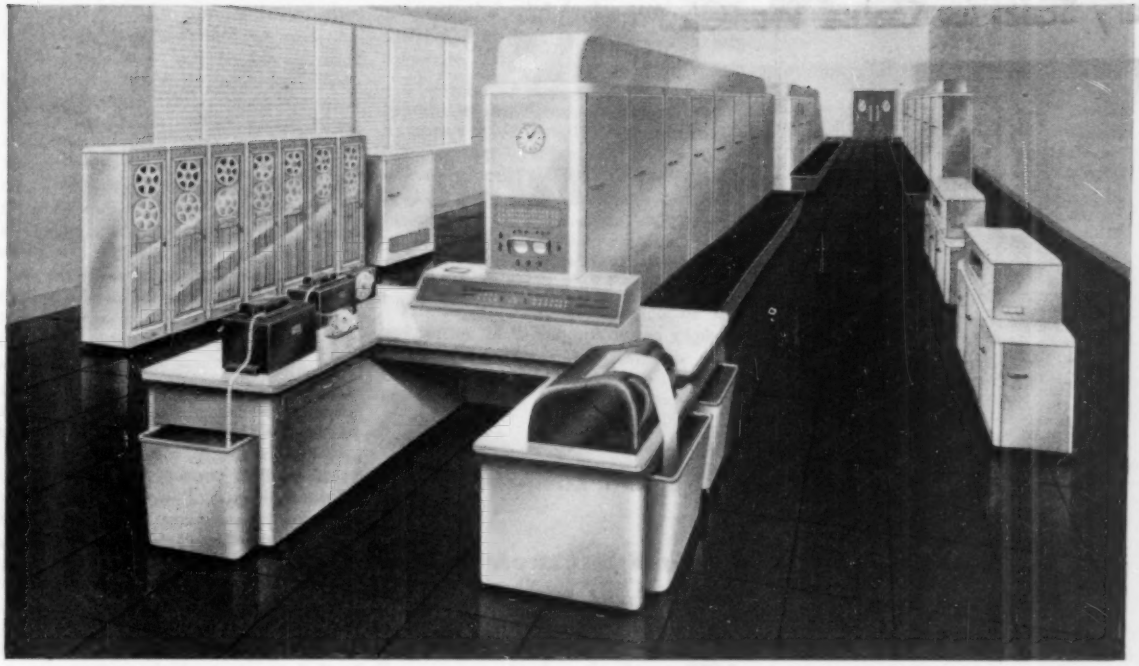
Although, then, the firm now employ in their computer installation two people on programming, two on the actual operation of the machine plus about 13 on punched card preparation, it should be stressed that the computer is integrated with other electronic equipment so that all these staff do not work full-time on preparing the input for the computer. The time taken to train the two people operating the controls of the *Hec 4* was about two weeks, which is quite understandable when it is remembered that, basically, it was really only a matter of teaching them the various switches. Their job, in fact, is practically the same as that of a machine minder.

The actual maintenance of the computer is now carried out by the manufacturer's own engineers. At first, Morgan's made arrangements to train a member of their instrument laboratory staff for this job, but their views have since changed in the light of experience gained.

One incidental advantage of the decision to change over to a computer



A view of the "works" of the Hec 4 E. Hollerith computer. One glance is enough to show why a computer takes a considerable time to build.



An artist's impression of a computer installation of the not-too-distant future. In this case, the machine is a Perseus built by Ferranti at a cost of about £300,000. It is the largest computer yet built in western Europe, and the first two models are being exported.

was that it provided the opportunity to brief all the clerical staff concerned not only about their own jobs but about the clerical procedure system as a whole. Some of the junior employees, in fact, had the chance to see for the first time how their jobs fit into the general administrative scheme of things.

More Stimulating Jobs

The company is naturally cautious about making firm predictions about how computers will alter clerical staff requirements taking the country as a whole. Each firm has its own system and in any case supply and demand for clerks varies from district to district. But in their own case the company feels that, over a period of several years, it is probable that less clerical labour will be used for some of the existing work and will be shifted to a type of work which will be livelier and more interesting. Such changes would, of course, be planned months in advance and, if staff reductions are involved, these will be achieved by non-replacement of wastages that occur in the ordinary course of events. To date, Morgan's have not had to bring in anyone from outside in order to operate the computer while the actual reduction in existing staff has been small.

Although systems and conditions vary from district to district, there are clerical staff requirements, nevertheless, which will be more or less constant wherever a computer installation is found. First, it must be borne in mind that such a machine has no reasoning powers in the human sense of the term—"electronic brain" is a gross misnomer. A computer is merely a blind, obedient mechanism so constructed that it can do certain types of calculation at incredible speeds provided, first, it is told what to do. It is thus clear that the effect of installing one will not be to do away entirely with clerical staff.

First-rate staff will rise in status and will probably have to make minor managerial decisions on the basis of results and information given out by the computer. Staff of moderate ability may well be retained for certain routine jobs in and about the computer installation, and probably only those of sub-standard ability will be forced out of the clerical field into other jobs.

Finally, we should not forget the chances that will be created through the installation of a computer. To begin with, much of the mental drudgery of clerical work will vanish and in its place will come the challenge of working out the best programme for a given job. Programming may indeed become a kind of aristocrat of office procedure and attract people who, while lacking academic qualifications, are of high intelligence and have the power of logical thought to a marked degree. Second, at the other side of the computer, as it were, there will be room for people who may lack the power to make sound intuitive judgments but who are quite capable of, to borrow a phrase, acting on information received.

One thing is certain. Many more companies are going to set up computer installations in the next few years and, other things being equal, they will have a marked advantage over competitors without them. So personnel departments could well start now to investigate what such machines will require in terms of staff.

Salary Scales for Clerical Workers:

Rainbows—without a Crock of Gold

By E. G. ROBINSON

'It is time employers regained their lost responsibility of deciding just how much an employee is worth to the organisation'

A LOT has been said and written in recent years about the need to relate manual workers' wages more closely to the effort of earning them. As a result incentive schemes of one kind or another have been widely adopted, both to increase productivity and to establish a satisfied labour force. Much less consideration has been given to the methods of determining the salaries of non-manual employees, such as clerks and junior and middle grades of administrative staff.

Many undertakings now operate scales and grades for salaried staff, and such schemes vary in merit and complexity. In most of them the appropriate point at which any individual is placed upon his scale is too rigidly determined by his age or the job he is doing.

Grading systems are not new to non-manual employees: they were widely used before the war, but there was then greater flexibility. Employers often applied them in complete secrecy, since they were under no obligation to disclose any information about them to employees, or to the trade unions.

The post-war increase in the use of salary scales for clerical and administrative workers, is due largely to the penetration by the trade unions into the non-manual fields. Before 1939 they were almost entirely unorganised; many companies refused to recognise trade unions representing clerical employees. But union influence was strengthened by the difficult labour situation which arose during the war, and which continued after it. The process was accelerated when large sections of private enterprise were nationalised, and wider recognition was given to the respective trade unions.

The salaries of thousands of clerks and allied workers are now the subject of agreements that are negotiated nationally between employers and associations of non-manual workers. Local government employees led the movement towards salary grading in 1946; they were followed within two years by their counterparts in the electricity, coal, gas and transport undertakings. It is not surprising that employers welcomed a mechanical system of remuneration which placed the main onus upon the shoulders of employees: determination of salaries, and the granting of increments had always been a difficult and time-consuming process.

But viewed in retrospect it can only be called a complete surrender of responsibility.

Underlying all salary scales is the trade union dogma of "the rate for the job". It has considerable popular appeal as a slogan, but it is based upon a too shallow concept of justice. The tolerable limits of work satisfactorily performed can range from the merely adequate to the superlative. This is particularly true of non-manual work, and it is unrealistic and inequitable to contemplate a job without regard to the quality of the person doing it. It tends to encourage relaxation of effort to that point at which performance is no more than just acceptable.

The majority of employees may not see this as an objection serious enough to outweigh the advantages of knowing exactly where they stand now and where they will stand in the future. But their first flush of enthusiasm gradually pales as the years bring them to the limits of their incremental progression, until they are left with no prospect of increasing their salaries, other than by prolonging their ascent in higher grades—if they are among the few to achieve promotion. Employees of exceptional ability are discouraged by the knowledge that others of lower capacity are getting the same money (or, even more money) for doing the same type of work.

The mechanical nature of these grading schemes loosens the bonds between employer and employee. Automatic increases of salary cannot give an employee the same satisfaction as those which are made as a tangible recognition of merit.

It is ironical that trade unions, champions of the dignity of labour, have unwittingly reduced the services of those they represent to a commodity which can be valued and sold at an agreed average price. Neither employer nor employee has gained by this. Employers are losing the right to call

the tune, and employees are in a confusion, no longer sure whether they are pipers or tune-callers.

At best their loyalty is divided between the employer who pays them and the union which demands their price. At worst, they resent their employer, give all their loyalty to the trade union, and render useless every effort of management to improve relations by means of such things as good working conditions and joint consultation.

If they are to regain the loyalty of their workers employers must reassert their right to reward special service and to show recognition of exceptional ability.

The public services employ large numbers of clerical and similar workers whose salaries and grades are determined jointly by the employing bodies and trade unions. It is not surprising that the officials of the unions concerned should draw upon the experience, and adopt the rate-fixing techniques of, the long-established manual workers' unions.

Stifling Effects

Indeed it is difficult to see what else they could have done in the light of their limited experience. But that was in the early days; they and the employers have learned a lot since then. Now is the time for them both to take a critical look at the results of a decade of fixed pay scales. It is up to employers to take the lead in organising a review: it is their organisations which suffer from the stifling effects of mechanical rewards.

In the past, proposals to improve pay or conditions of service have invariably come from the union side. Employers have been forced into defensive positions, and have consequently lost the goodwill of their employees. Improvements would benefit, not only the parties immediately concerned: by increasing the efficiency of the work, they would benefit the customer.

How these improvements can best be made must, of necessity, depend upon the findings of a proper enquiry. Fundamentally though, they will have to take the form of a compromise between a rigid scale known to all, and a secret system subject to arbitrary application—a two-fold scheme, grading the job on the one hand and the man on the other. The job evaluation could well correspond to existing scales, while the superimposed rating of the employee should take into account the personal aspects of the man-and-job relationship, rewarding those human attributes which rise above the merely adequate.

The method and application of the grading of this " human factor " would have to remain strictly confidential and open neither to discussion nor negotiation. It would be impossible to convince everyone of its absolute justification in individual cases, or even to avoid the occasional mistake. But without complete flexibility the scheme would certainly fail.

Employers must be relieved of the possibility of being asked to explain their actions in this and similar matters. Decisions are then less likely to be based upon what can easily be justified, than upon good judgment, which is not always the same thing.

The extent of the merit weighting, the authority for granting the increases and evidence required for them, would depend largely on local conditions and organisational structures, but the sums additional to basic rates would not need to be large *provided they were not insultingly small.*

The objective of the merit rating system would be to provide management with a means of recognising above-average ability and conduct. Just as important, it would give them back their declining responsibility of deciding just how much each employee is worth to the organisation.

Managing Retail Staff

An Ever-Open Door Holds This 'Family' Together

LIKE their colleagues in industry, staff managers in the retail world have their full share of problems, but they do start off with the advantage that loss of individuality is something their employees do not feel so acutely as do people working in factories. No doubt dealing directly with the public is largely responsible for this; it can be an exasperating job at times but at least it calls for the exercise of individual personality and judgment. And maybe that is why even in the largest department stores the commercial equivalent of a " sense of family " is not uncommon. A psychologist might in fact say that the person behind the counter feels that he or she matters and, that primary need satisfied, has something left over for the group.

It is a fruitful line of reasoning but here we are concerned with the effect of this " sense of family " on one aspect of life in the big store — namely, on the attitude of employees to the sports and social club. In industry generally, such clubs are a kind of extra used mostly by a few very keen types, but in the retail trade they play a much more positive part in personnel management. This may be a survival from the world so well described by H. G. Wells in *Kipps* when the whole life of the counterhand was virtually tied to his job, but there are a number of department stores which do not run a hostel system yet whose sports and social clubs are a major factor in recruiting and holding staff.

One such is the Harrodian Club run, as might be imagined, by Harrods for its own employees and those of its associate companies, D. H. Evans and Dickins & Jones. This club occupies a 23-acre site at Barnes which is only 30 minutes by bus from the company's world-famous Knightsbridge store and serves some 3,400 club members of whom about 1,000 are regular users.

It has been in existence since 1894 but has of course greatly expanded since its early days until there are now well over 20 sections. Activities catered for include archery, athletics, badminton, bowls, bridge, chess, cricket, cycling, old-time and modern dancing, entertainments of many kinds, football, golf, men's and women's hockey, netball, rifle shooting, rowing, rugby, swimming, table tennis, tennis, theatrical and choral and orchestra. A recent addition is an Under-20 Club which meets every Wednesday for Rock 'n' Roll and jiving and which attracts about 200 members every week.

The club house proper is a large brick-built affair with bar, ballroom with a sprung floor, fully equipped stage, billiards and table tennis rooms, dining room for 150 people, dressing rooms and—need we say it?—a television lounge. It is open every day of the year except Christmas Day and Boxing Day and is under the general supervision of the General Secretary of the Club, Mr. B. A. Stoker, who in fact has a flat on the Club premises.

One main reason for the success of the Harrodian Club, Mr. Stoker stresses, is that membership is entirely voluntary. He believes that lots of firms make the mistake of making membership of such amenities a compulsory matter thereby putting people off right from the start by building up an idea of coercion. Anyhow, at Harrods, members pay a token 6d. a week for which sum they can join any number of sections and go as often and whenever they like. Wives and husbands can join as honorary members (though they cannot represent the company in matches with other firms) and friends can be brought along whenever a member wishes. During a typical week, in addition to the Under-20 hop already mentioned, there is old-time dancing, sectional and store departmental functions and a dance every Saturday night for which function the Club runs a special shuttle service of buses from Hammersmith.

Of much interest too is the work put in by the Club management for the Company's pensioners. Once a month during the summer every one of them is invited to some kind of "do" put on there, and the Company is very pleased to be able to report that on average about half the pensioners attend.

Now a word about the formal administration of the Club. The body dealing with the policy and finance is known as the Management Committee and it consists of a president (Sir Richard Burbridge, Bart., CBE, chairman of Harrods) and a chairman and treasurer (Mr. W. T. H. Davies, the general manager of Harrods) plus four members appointed by the president, four elected by the Club members and representatives from each of the associate companies and one appointed by the chairman of the Staff Council.

Dealing with the day-to-day routine of the Club is an Executive Council consisting of two members from each Club Section. Among other things, this Council recommends that money be spent on such-and-such an activity and of course the top body, the Management Committee, has the power to grant or refuse. Each body meets regularly once a month.

While on the matter of administration, it should be mentioned that Mr. B. A. Stoker reports not to the personnel department but to the general manager, and has in fact two jobs: general secretary of the sports and social club and social secretary of the Company. This arrangement has worked well, for not only has the personnel department already enough to deal with, but also, to quote his own words, "even in these enlightened days, people are still just a little bit scared of the idea of 'personnel'. It still suggests something of discipline".

As social secretary, Mr Stoker's duties include arranging accommodation for new members of the firm who cannot find a suitable place for themselves. Often, too, he has to try and help staff over private problems. He is also responsible for the holiday information bureau. It is simplicity itself, consisting merely in asking people who have found good hotels and other accommodation at home and abroad to pass the details on to the bureau.

This briefly, then, is a description of the social arrangements at Harrods. Like all well-run matters, there are the ingredients of thoroughness and thoughtfulness, but are these the only keys to the signal popularity of the Club? (How pleased and surprised would be the average club secretary in industry if nearly 30 per cent. of the employees used the sports and social club regularly.)

Or does the fact that Harrods recruits a considerable number of staff from the provinces have anything to do with it? Mr. Stoker thinks there may be something in this for he is aware that for the newcomer London is a dreadfully lonely place, but on the other hand the figures show that the Club is equally popular among the Londoners born and bred. He is convinced, however, of the value of keeping the staff informed about what is going on at the Club, and regular propaganda about its programme of events is put out in news sheets and posters, in addition to which staff are told about special events at the weekly meetings held by departmental managers.

In the final analysis it may boil down to this. Harrods have an elegant and well-kept club sited away from the place of work where the activities are so balanced that there is lots of interest to both sexes. And what better than to combine first-rate facilities for active leisure with the opportunity for boy to meet girl?

Two generations of the Harrods "family": left, the Under-20 Club in full swing; right, Sir Richard Burbidge chats with older members.

MANAGEMENT
NEWS ★ NAMES ★ IDEAS

Catching Them Young

WHEN boys and girls of Springbank County Secondary School, New Mills, Derbyshire, went back to school last month, they found that a new special series of lessons on productivity and its implications had been added to the curriculum.

The experiment has been initiated by the joint enterprise of the Buxton Education Sub-Committee and the High Peak Productivity Committee with the view of impressing upon young people that the continuing prosperity of our country depends upon high productivity. At present productivity is looked upon with suspicion by many workers who regard it as a threat to their well-being. Few of them realise its importance to the country or that, if productivity is low, the industry is inefficient. It is hoped that this attitude will disappear if they are told the facts early enough in their lives.

P.M. at Is. a Talk

PSYCHOLOGICAL Aspects of Personnel Management is the title of a series of lectures being included in the current session of courses at Harrow Technical College and School of Art, Station Road, Harrow. The course consists of 20 lectures for a fee of only £1, and aims to give those interested in personnel management an account of some of the findings of psychologists which influence industrial relations. In addition, contributions by psychologists to problems of selection, training and job analysis will be covered.

A New Technique

THE first book on interfirm comparison produced in Great Britain is published today by the British Institute of Management under the title *Interfirm Comparison for Management*. This is a management technique relatively new to this country which provides a firm with a few key figures showing how its operating performance and financial results compare with those of similar firms in the same industry or trade.

Sir Hugh Beaver, vice-president of the BIM, says in his foreword to the book: "Relatively little has so far been known in this country about the way in which interfirm comparison works, although in various other countries (notably Germany, Switzerland and the U.S.A.) it has for many years been extensively used and valued."

The book shows by means of practical examples how this technique works and lists more than 300 comparisons conducted in various countries and compiled by the BIM in the course of research into the subject, which gives the reader an easy check on whether a comparison has been conducted in his specific industry or trade and what information is available.

Miss E. D. Catling personnel manager of the Harrimonde Clothing Factory photographed with Mr. Frankie Vaughan on the occasion of his recent visit to Brighton. "Isn't he smashing!" was the opinion of the 400 girls.

A Factory With a Home For Kiddies

A FEATURE of the new 102,000 sq. feet factory built for the Platignum Pen Company at Stevenage, Herts, is the 14,000 sq. feet welfare block which adjoins the plant. It includes a nursery and playground where working mothers can leave their infants in the care of qualified nurses and, if they wish, join them for lunch instead of using the main canteen. The nursery is indeed a show-piece with plenty of toys, miniature desks and beds where the kiddies can rest after lunch. Large floor-to-ceiling windows keep the atmosphere bright and cheerful and colourful murals—depicting characters from nursery rhymes—decorate the light walls. The welfare block also houses food stores and a first-aid centre as well as a superb modern canteen.

Nursery rhymes, toys and plenty to eat.

Office Training Seminar

A FIVE-DAY residential seminar on the training of office staff is being held by BACIE at Stratford-on-Avon from October 13 to 17. Among the subjects dealt with by specialist speakers will be: office organisation and the need for clerical training; the part of commercial apprenticeship; commercial qualifications; the problems of office management; automation in the office; training in the use of office equipment; and secretarial training. There will be much opportunity for discussion at the end of each paper and principles will be related to practice by means of live case studies which will be dealt with in syndicates.

Community Wooing

A NEW programme, designed to explain the important aspects of the Company's operations to local inhabitants, has been started by the Mobil Oil Company at their Coryton Refinery in Essex. Public invitations have been extended to Southend residents to visit the Refinery in October, when a series of four "Open Houses"

will be held on consecutive Wednesdays and Saturdays.

The scheme—believed to be the first of its kind in this rapidly increasing industrialised area—is being held with four objects in view:—

1. To explain refinery operations to inhabitants who live in an area in which this aspect of industrial activity is predominant.

2. To outline how these local manufacturing operations serve the economy of the United Kingdom.

3. To describe Company Policies and our efforts to be "good neighbours".

4. To increase existing goodwill between local residents and one of the large industrial employers in the neighbourhood.

All residents who apply for tickets will be met in Southend and given free transport to Coryton. There they will be given a short introductory talk prior to a coach tour around the Distillation and other refining units. The visit will take about 3 hours.

Suggestion Posters

THE Industrial Welfare Society has established a new service to industry: suggestion scheme posters, published at regular intervals at an economical price—2s. 6d. each.

The posters are 15 in. wide by 20 in. deep—large enough to be read at a distance, but small enough to go on a works notice-board. They are screen printed in two, three, four and five colours on stout paper. Some of them incorporate the work of famous

Old theme, new poster.

cartoonists, such as David Langdon and Jak; others use the striking Dayglo inks. Six designs are available now and new designs will be published each quarter in groups of three, starting in January 1959.

The IWS is also organising a national suggestion schemes conference to be held at the Grand Hotel, Brighton, from Friday, October 31 to Sunday, November 2.

News Snaps . . .

ADVERTISE.—Employers seeking personnel should advertise rather than apply to an employment exchange, said Mr. R. C. Franklin, of the Simplex Electric Company, in a talk to Stoke-on-Trent Rotary Club, last month. He believed that better applicants resulted from advertising.

THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES for the year 1957 was published on September 16.

GREETINGS BY POST.—Employees of Brent Press Ltd., Greetings Ltd. and ILO Ltd. (makers of greetings cards) now have their monthly works newsletter, *Greetings from Brent*, mailed to their homes. Announcing this change in method of delivery, the firm stressed the extra work it gave to administrative staff, but added: "We hope you will appreciate this recognition of you as a person and that you, in turn, will look upon the company as a body with which you have a common interest".

PROFIT SHARING ANSWERS.—"Profit sharing is hard-headed business common sense", says the Profit Sharing Research Foundation (1718 Sherman Avenue, Evanston, Illinois, USA), in a new booklet called, *What Every Businessman Should Know About Profit Sharing*. It answers 15 key questions and lists several other publications for further reading on the subject. Single copies will be sent free to interested readers.

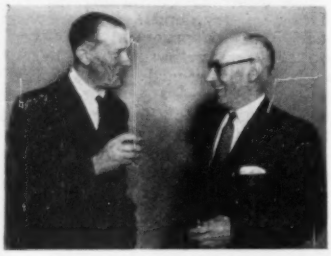
CURRENT TRENDS.—Introducing its new 20-page illustrated brochure, *Electric Catering*, the Electrical Development Association states: "for every stage in the preparation, cooking and serving of meals there is an item of electric equipment to make the job easier, cleaner and quicker". Sections are included on snack bars and quick-service establishments, and canteens in works, hospitals and schools. Copies can be had from the EDA at 2 Savoy Hill, London, W.C.2, or from Electricity Boards.

FIRST PERSON.—*Safety and I* is the title of a new booklet which has been issued to employees of Thomas Hedley & Co. Ltd.; it lists and explains the principal rules of accident prevention. The personal touch is more than a gimmick, however: each booklet is intended as a safe-conduct to work. Space is left for the employee's name and department, and the last page is a certificate, to be signed by the department and factory safety managers, showing that "—has a thorough knowledge of general safety rules and, because of this, will be paid at least the factory minimum job rate".

INFLUENCE AND IMPACT of the house journal upon the community at large was the subject of a talk given by Geoffrey A. Phillips, national secretary of the British Association of Industrial Editors, at the fourth congress of the Federation of European Industrial Editors Associations, held in Scheveningen, Holland, last month. Over 30 members of the BAIE were among the 400 delegates.

Appointments . . .

Mr. H. S. Briers has been appointed personnel manager at Fort Dunlop, Birmingham, following the retirement of **Mr. W. G. M. Goff** (see Point-Counter-Point). Mr. Briers joined the company in 1915 at their Nottingham depot, and has subsequently held a



variety of posts in Manchester, Leicester, Southampton and Bristol. He is seen here, right, chatting to the assistant personnel manager, Mr. A. G. Cogswell, at a social gathering held at the Fort last month to mark Mr. Goff's retirement.

Mr. Robert Downer has been appointed press officer for the British Association of Industrial Editors in succession to **Mr. Len Adams.** Mr. Downer, a member of the BAIE's national executive for the current year, is the editor of "Mullard Outlook" and "Mullard World Review", the house journals of Mullard Limited.

Lord Colgrain of Everlands has been appointed honorary treasurer of the Hospital Saturday Fund. He is chairman of Grindlays Bank and a director of the National Bank of India. The Hospital Saturday Fund, one of the oldest voluntary health schemes, has the Queen as patron, and the Lord Mayor of London as president.

The British Institute of Management announces that **Mr. D. Macdougald**, F.C.I.S., has been appointed general secretary of the Institute, following the recent resignation of **Mr. F. R. Livock**, T.D., the director. Mr. Macdougald became secretary of the Institute of Industrial Administration in 1948, and has been secretary of the IIA and BIM since their merger.

Discussion Leader's Page

A WAY TO WIN AND A WAY TO LOSE YOUR EMPLOYEES' CONFIDENCE

PRIDE IN THE JOB, NOW THAT THIS COMPANY HAS A NEW APPROACH

LAST month I outlined a way of looking at a breakdown in discipline which would help the industrial manager to diagnose whether this was a symptom, showing that his organisation was in a state of unhealthy disequilibrium. I suggested that the manager should check three main areas of his responsibility; first, the organisation of the work his staff is doing; secondly, the relationships within his work group; and thirdly, the attitudes of his staff towards management and management's objectives.

The experiences of the management of the Harewood Manufacturing Corporation show how a breakdown in employee co-operation could be placed almost *entirely* at the door of methods or organisation used by the management. The problem was to improve production standards: in this company frequent changes of methods in making pyjamas were necessary in order to keep prices competitive. But when changes were made, output fell and only one-third of the girls subsequently recovered their old rate. Others remained substandard or left. Sixty units an hour was the average score for a good operator.

When a change again became necessary management tried four different approaches in an attempt to analyse some of the defects in the situation and to modify their methods of approach.

Four groups, equal in every way, were chosen—

Group 1: change was introduced in the old way by the time study engineers.

Groups 2 and 3: a new method was adopted. Management called a meeting of the girls and the time study engineers. They gave an undertaking that they would study the job and train the operators in the new methods before establishing the new rate. They then asked the girls for suggestions on how they would make improvements. Immediately they got so many that they could not write them down fast enough. Subsequently the girls spoke of the new rate which they had helped to set up as "our rate".

Group 4: here the method of change was a modification of the methods used in Groups 2 and 3. After discussion a few members were chosen for training. The new rate was established on their performance and they were assigned to teach the rest of the group.

The results of these different approaches were as follows:—

Group 1: only reached 50 units on the new job and many left.

Groups 2 and 3: output up to 65 units almost immediately, then on to 73-75.

Group 4: output rose more slowly to a final 69 units.

Two and a half months later management gathered together the remains of Group 1 and instituted a similar change to Groups 2 and 3. This group achieved a score of 73 within eight days and no one left.

This management asked themselves if there was something wrong with the organisation or their leadership which was weakening the will to work and causing the girls deliberately to restrict their output. Or did the fault lie in the personality of the girls themselves?

They decided that poor relations with the time study department and with themselves were arousing strong feelings of resentment, hostility and insecurity in the group. The wage payment system was considered by the girls to be unfair. Change was strenuously resisted and the group was consequently working against, and not for, management goals.

The behaviour of Group 4 bore out this thinking. The group severely restricted their output and many of them left.

PREJUDICE BARS NON-GRADUATES FROM THE TOP JOBS

A LETTER from a research chemist opens a new and interesting subject for us. He suggests that the decisions of many managers are *biased* by their own past experiences, or tradition, or by their habitual way of thinking.

"*In our company,*" he writes, "*there are two distinct classes of management. These have different routes of recruitment, and their subsequent career in the company diverges from the first day. One group is recruited from the ranks of university graduates. After spending time learning the business, each of these men obtains an administrative post of importance. All the top jobs are held by them. Other people, like myself, have obtained good technical qualifications and we can rise to a certain height in the company but it is difficult for us to go any further. This method of organising the management is hallowed by tradition and, of course, the present managers, who have been chosen in this way, are biased in its favour. I feel a lot of good talent is being wasted.*"

I wonder if we can delve more deeply into this whole subject of bias? We all suffer from it in one form or another (often without realising it) and none of us can escape from being the victims of other people's biases. We all have our pet prejudices, for example, about other people's

(*continued on page 31*)

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The applicant for that job vacancy seems to fit, but would she be even better at another job? And how do you set about assessing her 'health'? Questions like these pose awkward problems. You must know the right answers

The personnel manager at one of the Microcell factories interviews an applicant for a job.

You Can't Afford to Gamble on Selection

by Dr. E. E. LIEBER

Medical Officer to the Microcell Group of Factories.

WHEN assessing the influence of an occupation on the health and future well-being of an applicant, the main criteria must be liability to disease, since this can be measured, whereas "health" so far defies reliable measurement. Every doctor in charge of patients is faced with this sort of question: has the dust from this shop or that section of the factory been the cause of his "chronic bronchitis"? Has stress played a part in the ætiology of the business executive's coronary heart disease? . . . These questions are difficult to answer.

Although, in industrial medicine, the doctor has less responsibility for individuals than those in hospitals or in general practice, he does have greater opportunities to study the distribution of disease in groups of people. He therefore acquires a vast knowledge enabling him to make a quick diagnosis of possible deficiencies in applicants. By using the method of epidemiology and by inspecting groups of workers, it is possible to gather information which again gives him some guidance in his selection of personnel for various jobs.

By observing the pattern of disease in groups of people, and by knowing the toxic manifestations of substances used in various industries, occupational hazards can easily be assessed. Professor Bradford Hill (*British Journal of Industrial Medicine*, 1955) defines sickness absence in industry as "incapacity to work which is not solely dependent upon a pathological condition but upon many other factors". E.g., a clerk with a fractured wrist can work—a driver cannot.

Occupational misfits can be placed into three categories, and the payment of wages while sick prompts a variable response in different workers.

1. Those who escape into illness, taking the maximum amount of sick leave.
2. Those who, whilst adapting themselves, gain satisfaction and relaxation from their after-work activities.
3. Those who complain but carry on with their work.

I remember once watching a board selecting students. The first question asked was "What do you want to do when you leave school?" and then, "Why do you want to do it?" This is very characteristic of the method we use in getting different answers.

In my capacity as M.O. at Microcell, it is often necessary for me to reject between three per cent and 15 per cent of applicants. This of course includes people who are dermatitis prone and have other allergic manifestations such as asthma, hay fever and nettle rash. There is the question of trying to fit a square peg into a round hole. It is often difficult to draw a definite line between those who should be regarded as maladjusted and those who do their job well enough but would have been more suited to another vocation. Vocational guidance is not merely a matter of intelligence tests and I.Qs.; they form only one aspect of a total

appraisal. Intelligence tests are not tests of knowledge, but a method designed to measure our ability to apply our knowledge to some useful service.

These have proved invaluable in determining the suitability of possible employees for their respective duties, thus simplifying our task of grading as follows:—

1. Higher professional and administrative workers.
2. Lower professional and executive workers.
3. Clerical and highly skilled workers.
4. Skilled workers.
5. Semi-skilled repetitive workers.
6. Unskilled labour.
7. Unemployable individuals.

Individual intelligence tests have proved to be the most effective method of selection. In most jobs a minimum of general intelligence is necessary for regular employment but of course there are some occupations where a much higher level of mental ability is essential.

In industrial work the abilities most commonly needed are manual dexterity and an understanding of simple mechanics. These qualities are assessed in a wide variety of tests and there is good evidence to show that there is a common element involved in all mechanical tasks which one might call "mechanical aptitude". Much research has been done in this field and it appears that these abilities are inborn.

Listen Carefully

In ancient Greece the physician, Galen, classified human beings into four types: phlegmatic, sanguine, choleric and melancholic. Although this classification has little significance today, we still aim to determine the temperament of a workman at an interview. It is, of course, a special art during an interview to put people at their ease in order that they may express themselves freely. It is also important to listen objectively and fully to every candidate for employment, as opposed to rapid question and answer technique. It is necessary for the M.O. at a factory to be familiar with nearly all the jobs going and to weigh up the candidate and decide whether his total personality is suitable for his new job. It is also important to be able to arrange to transfer a worker from one job to another which is more suitable.

The crucial test of a worker's suitability remains his behaviour in action, and if, after a reasonable period, an individual proves ill-adapted and is unhappy in his work, a change should be made. It should also be borne in mind that an unsuitable supervisor can sometimes cause not only much unhappiness but also psychosomatic illness among the employees in a department.

Perhaps the most important part of the problem in selection of personnel is to exclude misfits. A careful study of dissatisfied workers whose ages range from twenty to fifty and varying in intelligence from higher than average to near mentally defective, showed that all were unsuited temperamentally or otherwise to the jobs they were doing.

Why They Failed

The cause of failure were diverse and included:—

1. The job was too easy.
2. Promotion was slow.
3. There was repeated illness.
4. The job was too hard intellectually.

I would like to mention here that it is wrong to exclude a worker simply because he has a poor complexion or a physical deformity. This is sometimes done by a personnel manager who is without medical knowledge. The M.O. must take the following into consideration in selecting personnel:—

1. Muscular strain.
2. Constant standing.
3. Constant sitting.
4. Good hearing.
5. Good vision.
6. Dry hands.
7. Right handedness (dexterity)
8. Hot working conditions.
9. Damp working conditions.
10. Dusty working conditions.
11. Nervous strain.
12. Risk of falling.

What is 'Health'?

"Health" is defined by the World Health Organisation as a physical, mental and social well-being, and not merely absence of disease. We can see from all this that health continues to defy reliable assessment. We must, therefore, develop better techniques for selecting personnel needed by industry. As time goes on and we get more experience in industrial disease, we become aware of the immense difficulties in selecting personnel. It is to be hoped that the future will provide better criteria for this purpose.

You can't always tell a man 'by the company he keeps'. But where working groups are concerned it pays to take . . .

A Closer

OUR personal relationships with other people are of the greatest importance to all of us. We care very much what other people think of us—even though we may sometimes pretend that we do not. So we are usually willing to go to some lengths to win their good opinion. Whether their attitude to us is good or not, it will affect our behaviour, both towards them and towards other people.

This question of *personal feelings* between people has not received the attention in the past which its importance justifies. Yet it is often at the root of such business problems as ineffective man-management, low morale in working groups, and high rates of absenteeism and labour turnover. In some degree it enters into all questions of business efficiency and industrial productivity, even those in which technological factors seem at first sight to be solely concerned.

In Elton Mayo's famous Hawthorne Experiment it was found that a group of high morale will continue to be productive in spite of a drastic deterioration in material working conditions. No one would suggest that material working conditions should not be improved, or that improvement in production methods, the physical working environment and so on, cannot have a favourable effect upon working efficiency. But Elton Mayo has shown us conclusively that this is

Look at People in the Round

By HOWARD JONES

not all: that the human factor must also be taken seriously into account.

The *working group* is the core of the problem. We have to ask ourselves a number of questions. What are the main characteristics of working groups? How do people work together in groups? How do difficulties arise in the working group, and how do we set about resolving or even preventing them?

The group may be small or large; democratically or autocratically led. It may be simple in structure: a small group of individuals meeting regularly as members of a committee. Or it may be complex: a system of overlapping and interacting smaller groups woven into an over-all group pattern. This is usually the case in a factory, with workshop, departmental, trade union and company loyalties all involved.

Each of these group patterns has its own distinctive effect upon the behaviour of its members. And the group leader, the manager for example, cannot expect groups to behave in a strictly uniform way.

Where he cannot change its structure he needs to work with the group in such a way as to minimise the structure's adverse effects, and to make full use of any advantages which it offers. All this—in addition to dealing with the personal feelings that are generated in all groups.

This demands a lot of understanding and skill on the part of the leader, but it is the essence of the management function. The "born manager" can handle these problems without consciously considering how he is doing it because he is extraordinarily sensitive to what people around him are feeling. For him intuition is the guide, and training is unnecessary.

But for most of us, reliance upon our intuitions is very unsafe: often it means that we are merely falling back upon our habits of mind or prejudices, or acting impulsively at the mercy of our own feelings.

Groups operate at two levels, *working* and *feeling*. The feeling aspect can either reinforce the work aspect or hinder it. It depends partly on the nature of the feelings, e.g., whether they are co-operative or hostile. It depends also partly on the kind of work to be performed; some kinds call for the evocation of strong feelings to bind the group together, or to keep them at work in spite of difficulties and obstacles. In other kinds of work, where clear thinking is required from group members, strong feelings, which prevent clear thinking, may be a real handicap.

To be in a position to take appropriate action, the manager needs to understand the effect upon his men of their relationships with each other. In other works he must be aware of their feelings about each other, and the effect that these are having upon their behaviour. But he must also be aware of the effect *their relationship with him* is having upon them.

And this means being aware not only of their feelings, but also of his own. For they will react unerringly to his attitudes, as he will to theirs.

But this is by no means all. Groups are not mere collections of interacting individuals. They have a unity of their own, which they impose on their

individual members through the public opinion of the group. None of us likes to be an odd man out. Thus the groups to which we belong wield tremendous power over our ideas and our behaviour. As a result, those who wish to influence individuals must often first influence the group. To try to argue individuals, one by one, into a particular line of action is frequently a waste of time.

On the principle that "the spectator sees most of the game", the perceptive observer, who is himself not involved in the situation, can often see such factors very clearly at work in an industrial problem. Take the case of an engineering concern which had grown very rapidly. The managing director was the founder; indeed, at the beginning, he constituted the total labour force. When the organisation was small he himself supervised work on the shop floor, and would often take off his coat to show a man how the job should be done.

As the company grew, however, he wanted to continue, as he put it, "to show an interest in the shops". He would often interfere, sometimes rather capriciously, in the work of his supervisors. He discussed problems directly with the men, and often made decisions about these after little or no consultation with the supervisors. The supervisors, naturally enough, resented this. They felt left out, rather afraid that they would cease to count. It was partly a fear that they would lose their grip, that discipline would suffer, but there is little doubt that they also felt slighted. It was partly a question of status.

Supervisors Resisted

But all this was revealed later. The immediate symptom was a tendency on the part of the supervisors to resist not only interference from top management but even justifiable suggestions, including some which would have made their own work easier.

Such obstructiveness, in its turn, encouraged the managing director to bypass them even more. And, of course, much of their dissatisfaction was displaced on to the men under them, and led to a host of petty difficulties—in one shop, to a major problem of labour turnover. By this time it would have been a brave supervisor indeed who would have stood out against the general opinion of his fellows that they could not trust top management.

Understanding of oneself and of one's men is the first essential requirement for effective management. In the case cited, all the difficulties arose initially from the remarkable lack of understanding displayed by the managing director. But understanding is only to a very limited extent a question of formal training. It is much more a question of cultivating one's sensitivity: being willing to explore one's feelings and reactions, and being willing to listen to the men and to observe them in a sympathetic way.

You may not agree with them, but if you are to understand how they feel you must be prepared to accept their feelings as real, and even in a sense to feel with them.

Your Eyes are Opened

As you become more aware of the relationships in groups, so you will become more capable of acting effectively, for you will be taking action with your eyes open. You will be in a position, for example, to show members how their feelings are interfering with their efficiency.

Sometimes to point this out, in a friendly not a hostile way, is all that is needed, especially when the individual in question is actually experiencing those feelings.

But to point out even what seems an obvious fact does not always work. The manager is "authority" and "the bosses" after all, and none of us likes to admit that he is wrong.

For this to be pointed out by the man's own group is a very different matter: all the power of group public opinion is marshalled to convince him. So there is every good reason for discussing personnel problems with the group involved rather than with individuals.

The keyword is *discuss*. To attempt to *tell* the group would work no better than telling the individual. They must be allowed to chew it over amongst themselves; they must be given indisputable facts on which to base their examination of the problem. If they then reach the same conclusion as the manager, they will be very staunch allies indeed: it will be their own conclusion, not one which they have reluctantly accepted, without conviction, from him.

Discussion usually goes through a number of phases: (a) identification of the problem, (b) study of its factually verifiable consequences, (c) examination of the verifiable facts influencing it, (d) working out a solution. And here is where the skilled manager can help.

Whether, in fact, it is an interpretation at the feeling level, or group discussion which is required, depends partly, of course, on whether the problem is a group or an individual problem. But even if it is an individual problem, the manager still has to judge whether this man, at this time, could accept such an interpretation from him.

In some cases, neither is necessary. Knowing what is really going on, the manager merely changes his policy, possibly his own way of behaving towards a man or a group, and the problem is solved.

Where *feeling problems* arise, they seem to come primarily from the individual characteristics of the people who are grouped together. Some people are more aggressive, unstable, domineering, subservient, jealous, or more dependent than others. But, for the most part, everything depends on how we make up our working groups. "Who works with whom" is important; and because the manager interacts in the group, his personality is no less important than the rest.

Groups Develop Habits

Once constituted, a group responds to the experiences which it encounters, and develops a kind of personality, almost like an individual. If it is fairly permanent, it begins to develop habits, and even rules. These may have arisen from within the group itself, like the rigid productivity "ceilings" which Mayo found were enforced among some men in the Hawthorne plant. Others may be imposed on the group from above: such as the formal hierarchy of leadership.

Formal structure can usually be changed by action of the management. Informal structure, springing from the group itself can be changed only by the group. And the group will only change it when it has discovered through a discussion of the issues that it wants a different structure. Consultation is worthwhile even when the decision is a prerogative of management. It takes time to reach a majority decision, but much of the time spent will be saved by the greater ease with which decisions can be implemented.

NEW BOOKS ★ NEW FILMS

The Red Peril in Perspective

The British Road to Stalinism: an IRIS survey (Industrial Research and Information Services Ltd.) *2s. 6d.*

THE great value of this concise survey of the British Communist Party since 1920 is that it presents in readily assimilable form facts that have until now required a considerable amount of research to uncover. Much of what it has to report is not new to the student of politics, but a number of forgotten facts are brought back into the light and the appendices in particular are useful compilations of dates and names.

The strength of this little book lies in the straightforward presentation of the tortuous, word-eating history of organised Communism in this country. Its weakness is an inability to resist occasional polemical comment on the facts. The plain story is in itself a sufficient condemnation of British Communism; the comments merely provide openings for disputation.

With an apt wit, this survey is dedicated to the commission appointed by the executive committee of the British Communist Party in September, 1956, to prepare a history of the party, and which has not yet completed its task. This delay is understandable, for it is not easy in an official history to account convincingly for all the sudden reversals of policy at the command of Moscow that are here revealed.

Forewords are usually commendatory, but Francis Williams, in introducing this book, does not exaggerate when he writes that it ought to be read by *everyone* who has any interest whatever in political and industrial affairs.

It is the industrial aspect of the British Communist Party's activities that is now of the most importance. Politically Communism has long been discredited in this country, as the figures recording the derisory extent of the electorate's support for it show. But industrially, particularly of course through the trades unions, Communism still wields an influence out of all proportion to the number of its supporters.

In the past two years, IRIS has done valuable service in defending democracy within the unions and rousing union members from the apathy that allows the Communists to dominate when by rights they should be a negligible force. "The British Road to Stalinism" is a worthy contribution to a full understanding of the meaning of the Communist menace and is strongly to be recommended to management and workpeople alike.

PUBLISHERS' ADDRESSES

Industrial Research and Information Services Ltd., 404 Maritime House, London, S.W.4.

Business Publications Ltd., Mercury House, 109-119 Waterloo Road, London, S.E.1.

Small Man's Guide

Equipment and Methods for the Smaller Office. Laura Tatham. *Business Publications Ltd., 5s. post free.*

RECENT technical advances have laid within the grasp of the man with the smaller office, many labour- and money-saving office aids. This book is intended to show him what they are and how they can best be used. In over 100 pages it describes office machines, equipment and services. It explains how office jobs can be done efficiently, quickly and economically by choosing the most suitable aids from a wide range of systems.

Emphasis is placed on utility, methods and profitability. The author explains clearly all the functions a machine can perform, as well as its inherent limitations; how it can best serve an existing system, or how a better system can be evolved, using the new machines, equipment and services now available. Wherever possible, some indication has been given of the initial financial outlay involved.

The book, it must be added, is not an encyclopaedia, but rather a comprehensive guide to efficiency in the office. Essentially a *desk*, as well as a shelf book.

★ ★ ★

Wheels within Wheels

WHEN a company decides to make a film about its activities it usually has something to shout about; and a well-made film is one of the best ways of shouting. (Pity the poor audience—the target for all this noisy jubilation.) It was with a noticeable sigh of relief, therefore, that Pressmen greeted *Progress in Wheel Manufacture*, a new film from Dunlop, at a recent showing in London.

For Dunlop proclaim their latest achievement quietly and tastefully,

Automatic production methods make the wheels turn faster and more smoothly at Coventry—and the job is easier, lighter and safer for employees.

albeit the film depicts an industrial revolution—in the automatic production of rims and wheel centres at its rim and wheel factory in Coventry. (A revelation, this, for the people who associate Dunlop chiefly with tyres.) There are no clever gimmicks or tricks of camera to confuse the audience, or to distract them from the simple and clear explanation of how the product was made by the old method, and how careful planning came up with a new, cleaner, more efficient and more economical process. The company, the producer and director, Spencer B. Simcox, and especially the cameraman and scriptwriter, John Haybittle, are to be congratulated on this neat little (14-minute, 16 mm.) documentary which has already captivated a group of fastidious Trade and Technical reporters, one of whom paid it the highest compliment possible: "Wasn't it short?"

The film, which is in black and white, has now been added to the sturdily growing Dunlop Film Library, and is available on free loan from 269 Kingston Road, Merton Park, London, S.W.19.

Incidentally, this new automatic process, which has halved the numbers of operatives and inspectors needed, has boosted production of rims from 120 to 500 an hour; and the production of centres, from 320 to 720 an hour. The jobs are easier, lighter and safer for the men: for instance, rim welding is now carried out in a fume extraction cabinet. There were no redundancy problems, say the management, because they slowed recruitment some time before the new process was installed. The unions were kept happy, too. Negotiations never had to go beyond the shop convenor level.

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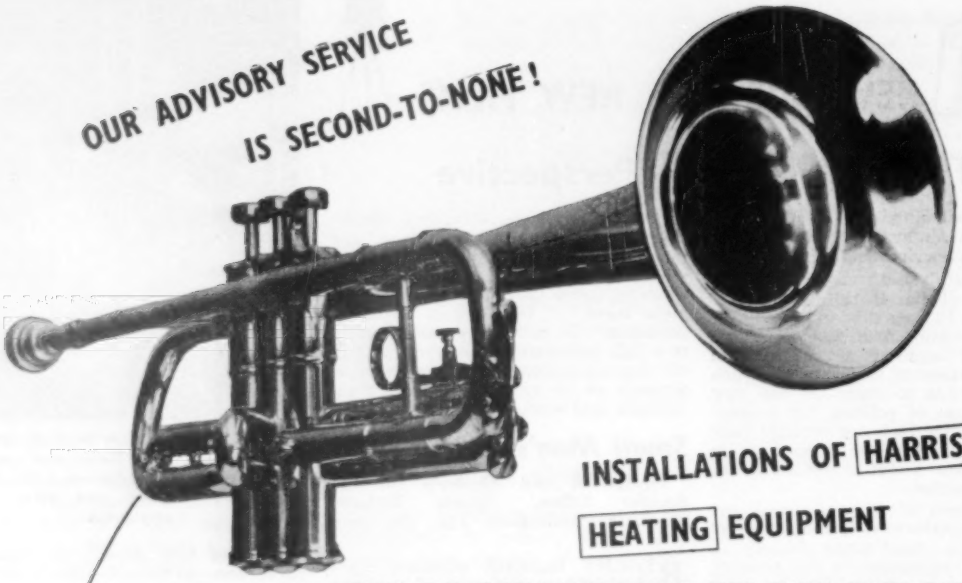

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HEATING IS A PROBLEM FOR EXPERTS

By R. BURNETT-HUGHES

THE planning of an efficient, economical and foolproof heating installation for any large factory works building always presents special problems for management.

Quite apart from the obvious difficulties of distributing heat in the most effective manner over a very large area, there will be innumerable other and equally important requirements to be satisfied: the relationship between the heating provisions and the nature of the processes carried on in the works, space conservation, safety and other precautions, economical operation and so forth.

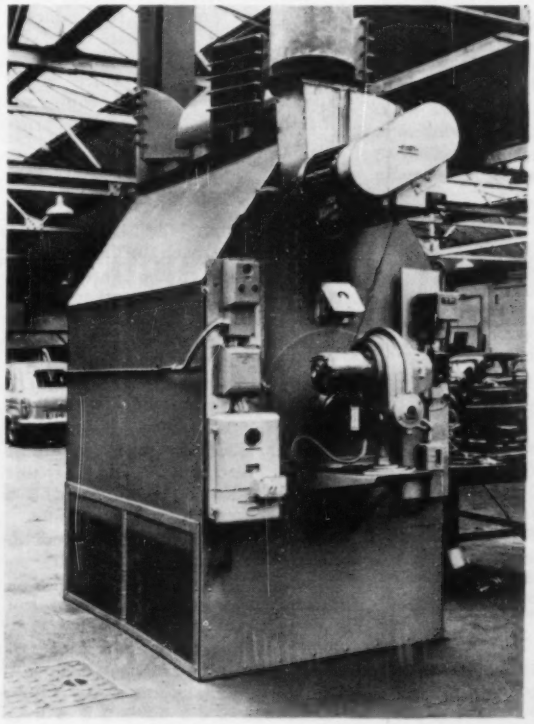
Frequently, a new works building will be completely finished structurally before adequate thought is given to the manner and means for its heating and ventilation. This often results in the heating engineer being unable to fashion a plant to meet all requirements. If no consideration is paid to heating problems at the outset of a building development, their later introduction may entail considerable expense, numerous structural alterations and loss of time.

If for any reason, such alterations cannot be made the upshot will be the installation of a less effective system and continued failure to meet all heating needs.

Valuable Advice

It is, therefore, always advisable to give the fullest consideration to the way in which a proposed large works building is to be heated and ventilated. If the prospective user consults a competent heating and ventilating engineer, so much the better. He can offer useful guidance and advice on technical, structural and economic aspects so that the most efficient type of heating can be installed.

The proper heating and ventilating of factories and large workshops in the engineering industry, for instance, have their own particular problems which are often vastly different in character and magnitude from those arising in small buildings that are used for general purposes. The underlying reasons are not always apparent to a builder when a new building is in the planning stage. They are seldom simple, often difficult to isolate and will always need the most scrupulous attention to detail.



The Harris large floor type oil-fired air heater is designed to provide abundant warmth for the whole of a large works. It is thermostatically controlled, switching itself on and off as it becomes necessary.

In the case of such a large building the heating engineer has to devise an entirely unique type of heat generating distribution system dependent on the class of work carried out, with each phase of the installation specifically adapted to meet the needs of the building layout and the working functions to be fulfilled.

The following are some of the chief points, *but by no means all*, to which the heating engineer gives intelligent consideration in relation to the heating of any building of this kind:

- *The heating arrangements must be capable of maintaining an even temperature throughout all portions of the buildings however remote from the generating plant.*

- The system must be sensitively adapted to compensate for all normal heat losses caused by the opening of large doors or numerous windows; and for the difference in outside atmospheric temperature during day or night, and the different seasons of the year.

- *The heating plant should be designed to be fully automatic (or as near as possible), in respect of all adjustments.*

- It is extremely important that the heating plant and associated distributive equipment be foolproof with regard to fire or explosion hazards.

- *It should be so constructed and operated that no portion of the factory can become overheated.*

- The distributive equipment should be disposed in easily accessible positions for most efficient heating, yet should leave the floor space completely free of all obstructions likely to impede the movements of any trucks, etc.

- *The system should be provided with simple regulators for shutting off the heat from certain portions of the factory at will, so that localised sections may have the temperature either raised or lowered to meet any temporary exigencies, storage, etc.*

- The heating plant should be as economical as possible in the consumption of fuel, transfer or feeding of fuel to burners, labour attention and maintenance requirements.

- *For preference the actual fuel burning apparatus should be situated as far as practicable away from the factory floor to eliminate fire risks.*

- The distributive ducting system conveying the heat around the walls of the factory should be designed to simplify essential maintenance, cleaning and repair work. For preference such equipment should be constructed and sited in such a manner that these necessary operations may be conducted quickly and safely without having to dismantle parts of the installation.

- *The system should be proofed against leakage of harmful gases, fumes, etc.*

- Heat distributors should be placed at a convenient height from the floor to ensure even distribution.

The satisfactory solution of all these and other practical requirements is often difficult but there are several standard types of heating plant and distribution systems which may be adopted and which will require adapting to suit the needs of the particular factory.

Great Steps Forward

Apart from the theoretical and technical approach to factory heating and ventilating, the various factors affecting the factory worker should be considered. Great steps forward in this matter have been made by many managements but there remain a considerable number who do not give enough attention to the subject.

Heating systems in many factories are far from adequate, providing an uneven distribution of heat to the dissatisfaction of employees who have to work under such conditions, and often leading to a low standard of morale in the factory generally.

Where machinery is concerned, poor heating can cause many unfortunate contingencies such as engine troubles when starting special equipment, which could lead to permanent damage, loss of time and money and all-round irritation.

Lack of warmth on the other hand, and overheating on the other, cause discomfort. Investigations have shown the extent to which the well-being and efficiency of the industrial worker can be adversely influenced by atmospheric conditions. Productive efficiency falls when the temperature rises unduly—particularly in heavy occupations. Output statistics show that in hot industries such as iron and steel, tinplate and glass manufacture, the rate of production is lowest in the hot summer weather and greatest in the winter. In some cases the output in the summer quarter has been found to be 10 to 15 per cent below that of the winter quarter: In badly ventilated tin-plate works this seasonal variation was found to be considerably greater than in well-ventilated factories. It has also been demonstrated that in the lighter work of textile operatives, their efficiency deteriorates as the temperature rises above the comfort zone.

Low temperatures adversely affect manual dexterity; where metal parts are handled, especially, temperatures below the comfort zone undoubtedly lower efficiency in operations requiring much dexterity.

Generally speaking, where atmospheric conditions are comfortable, one also finds the highest records of efficiency and safety.

Systems of heating and ventilation must first ensure an adequate supply of chemically pure air; and after that, a proper balance between heat production and heat loss.

The heat resulting from combustion of food within the body maintains the body temperature well above that of environmental air, while at the same time heat is constantly being lost in the body by radiation, conduction and evaporation. Thus, under normal conditions the body temperature is maintained at its normal level of about 98 deg. F., the heat production being balanced by the heat loss, or by the action of a heat-regulating mechanism in a normally healthy person.

Easing the Strain

The human organism is capable of adapting itself to variations in environmental conditions, but its ability to maintain heat is limited. Therefore, in order that the process of maintaining a heat balance should not impose too great a strain on the body, with the accompanying deleterious effect on productive efficiency, environmental conditions should be planned to assist, and not to hamper, the body's efforts.

Processes of life of an average-sized man, 5 ft. 9 in. in height and weighing 160 lb., require a minimum production of about 400 B.Th.U.'s per hour for temperatures from 65 deg. to 85 deg. F. with moderate relative humidity and with moderate exercise. The dissipation

of the three forms of heat is accomplished in the following manner: radiated heat to colder objects, convected heat and latent heat of evaporation of moisture either from respiratory tract or perspiration from the body surface.

The following table shows the relation between the worker's metabolic rate and varying degrees of activity, from which it will be seen why it is necessary to achieve varying conditions of temperature for persons engaged on different classes of work.

Activity Class	Metabolic rate per person per hour
Severe heavy work ...	2,270
Heavy work	1,200
Moderate work	800
Light work (standing) ...	660
Light work (sitting) ...	550
Resting	384

This, when applied to heating, demonstrates how the warmth conditions of the body are governed by the following factors.

(a) **Heat loss** by radiation from clothing and exposed skin surface to cooler surroundings.

(b) **Heat loss** by convection from such surfaces, owing to contact with the surrounding air, the temperature of which is considerably lower than that of the body.

(c) **Heat loss** by evaporation from skin and lung surfaces.

(d) **Heat gained** by the combustion of foodstuffs within the body.

(e) **Heat gained** by the absorption of radiation.

Thus it will be seen that factors (a), (b), and (c) must balance factors (d) and (e). The process is assisted by convective heat, the function of which is to warm the air to a comfortable degree, thereby reducing heat loss from the body by convection.

From what has been written, it is clear that factory heating today is not a haphazard, hit-and-miss affair which merely involves the installation of a given number of appliances to cover a given volume of factory space. It is rather something that should be planned in consultation with an expert, and firms planning to overhaul existing systems could with profit get in touch with the Institution of Heating and Ventilating Engineers, whose headquarters is at 49 Cadogan Square, London, S.W.1.

Pride — and Prejudice

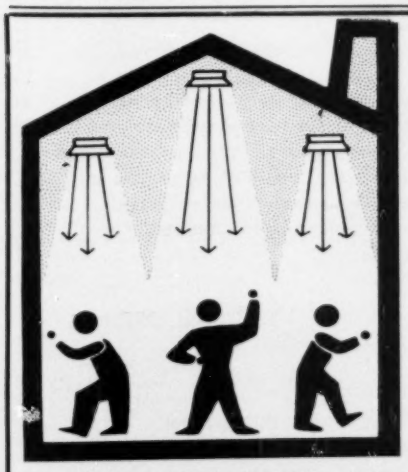
(continued from page 21)

manner and appearance. Some behaviour traits disarm and please us; others repel and annoy us. We tend to favour people who are "like" ourselves. We feel at home with them and we understand them and so we judge that they are the "right type".

This, however, is only one aspect of bias. In reverse, the manager or personnel manager is having an equally strong effect on the person he is judging or interviewing, and is therefore, *conditioning* the kind of answers he gets. Then again, biases have different origins and different strengths. Some people, for example, hold such strong prejudices on some subjects that they become completely incapable of carrying on a rational conversation in that area.

I should like to take up these other aspects when we have space for them. Meanwhile, write and tell me your experiences. Have you suffered from other people's biases? Do you recognise biases in your own or other people's behaviour and, if so, what effects are these having?

DISCUSSION LEADER



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CATERING TODAY

★ AN INFORMATION AND ADVICE BUREAU FOR CANTEEN MANAGERS

By LESLIE BANHAM

Make the Most of Vitamin C

NOT even the Scarlet Pimpernel himself could have been as elusive as that d——d vitamin C when it comes to cooking a tasty—and nutritious—meal. If, however, you are determined to give your customers the greatest nutritional value in the food they eat, there are a few simple rules you cannot afford to neglect.

Generally speaking, you should ensure that green vegetables are fresh, in sound condition, and stored for the minimum time before being cooked. Green should be shredded just prior to the time that they are required for cooking and should be cooked in the *minimum* of salted boiling water. They should be added to the pan slowly enough for the water to reach its boiling point again quite quickly. This is a matter of practice and depends on the size of the boiler used, the amount of greens required and heat supplied to the boiler. The principal aim should be good appearance and palatability *without the need for soda in the water.*

Since nutrition is a quantitive science it is not surprising that potatoes are a useful source of vitiman C, not because of the content per ounce, but because of the amount of potatoes which we eat daily. Treat them with respect in the potato machine and keep any subsequent mashing in the mixer down to a minimum. The greatest possible damage to any vegetable lies in the interval in which the vegetable is kept hot between cooking and service.

★ Self-Service Dept.

THE effect of this year's disastrous weather on the potato crop is demonstrated all too clearly by the prices charged at the moment—a foretaste of what the price will be by Christmas. Potatoes, however, are part of the staple diet and the answer to that very pertinent question—canteen cost—lies largely in the effectiveness of portion control at the service counter.

Some canteen managers have experimented with the idea of letting customers help themselves to potatoes and other vegetables. They have found that in many cases consumption has dropped. While some customers will obviously take more than a normal share, the remainder (particularly women and girls) will take the minimum of potatoes and vegetables.

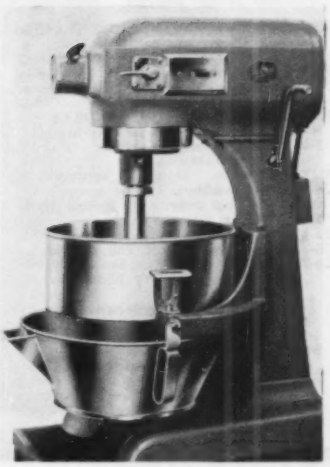
The possible effect of an inadequate amount of vitamin C in the diet of figure-conscious females may well be offset by including fresh fruit on the menu.

A link between vegetable cooking and last month's feature on boiling pans is provided by the Bartlett gas-heated vegetable boiling pan. It is supplied with vitreous enamelled outer case and stainless steel inner pan and cover. Segmental baskets and porringer linings can also be supplied.—G. F. E. Bartlett & Son, Ltd., Maylands Avenue, Hemel Hempstead, Herts.

★ Soup Needs Selling

SOUP—a pleasing, colourful, nourishing forerunner of every good meal, designed to stimulate the flow of gastric juices and add to the enjoyment of the meal as a whole. Your customers may not always see it that way; and it may require a lot of concentrated " selling " before they demand it. But, for the caterer it means that the range of the meal can be extended, and (to put it bluntly) soup can be a useful money-spinner.

Each year sees an increase in the number of makers of soup powders and soup extracts—and in the range of their products. Soup powders, like all other pre-prepared products, make it easier to cost the portions served, and make for a uniformly tasty soup, rather than the excellent-today-and-not-so-bright-tomorrow variety that may have put your customers off soup in the past.



Where soup is made in the canteen it is useful to have some mechanical method of sieving and straining cooked foods. Amongst the various attachments designed for use with the Hobart mixers, this colander and sieve is invaluable, say the makers, for the preparation of soups, puree, jellies, sauces, etc., and the ricing of potatoes. The unit will operate from Models AE 200 upwards; size varies according to the size of machine.—The Hobart Manufacturing Co. Ltd., Hobart Corner, New Southgate, London, N.11.

* * *

Interviewing applicants for the post of waitress at a works canteen run by the Merseyside and North Wales Electricity Board, the catering manager noticed one girl who seemed to have the necessary ability for the job. One last, formal question: what had been her previous occupation?—A juggler in a circus. Abrupt end of interview.

November Diary for Management

BURTON MANOR (Burton in Wirral, Cheshire)
17-28 Supervisory management. Economic and industrial history, industrial and human relations, written and oral expression.
23-28 Electrical safety for foremen.
30-Dec. 5 Introduction to supervision. Course for chargehands and junior foremen.

COLLEGE OF PRODUCTION TECHNOLOGY (Great Chart, nr. Ashford, Kent)
10-14 Foremanship. Five-day residential course.
17-21 Foremanship. Five-day residential course.
24-28 Office methods. Five-day residential course.

INDUSTRIAL WELFARE SOCIETY
Residential conferences and workshops
3-6 **Roffey Park, Horsham.** Residential workshop on internal communications.
14-17 **Southport.** Trends in apprenticeship training.
28-Dec. 1 **Brighton.** Office executives.
Non-residential courses at Robert Hyde House, London
5-6 Women supervisors.
12-13 Selection and promotion.
18-20 Personnel records and procedures.
24-28 Training methods. Sandwich course of three sessions. Others to follow: January 12-16, May 25-29.
4 Pension funds.
4 Manual lifting and handling.
19 Canteens course.
27 Management seminar on human relations.
Meetings outside London
11 **Birmingham.** Incentive schemes.
13 **Liverpool.** Work simplification in the office.
19 **Glasgow.** Work simplification in the office.
25 **Birmingham.** Canteens course.
26 **Manchester.** Industrial health.

INSTITUTE OF INDUSTRIAL SUPERVISORS
Weekend residential courses
7-9 **Stratford.** The practice of supervisory management.
7-9 **Scarborough.** Human relations.
7-9 **Bridge of Allen.** Economic background for the foreman.
7-9 **Buxton.** Economic background for the foreman.
14-16 **Bournemouth.** The foreman and cost reduction.
21-13 **Stratford.** The practice of communication.
28-30 **Droitwich.** Organising for production.

RESIDENTIAL COURSES FOR GIRLS (30 Devonshire Street, London, W.1.)
15-22 **Avon Tyrrell, Hampshire.** Course for girls being considered for promotion.

SUNDRIDGE PARK MANAGEMENT CENTRE (Bromley, Kent)
2-21 Measurements for Management. Three-week residential course.
23-Dec. 12 Measurements for Management. Three-week residential course.

URCHFONT MANOR (Devizes, Wiltshire)
3-8 The outlook for British industry. Six-day course for junior management on coming changes in scientific development, material and human resources, economic and social affairs.
10-15 The human factor in the office. Six-day course for office supervisors, secretaries, accountants and other office workers.
24-29 Thinking, speaking, writing. Six-day course on committee and report work.

OCTOBER STOP PRESS

UNIVERSITY OF BIRMINGHAM (Institute for Engineering Production)
27-31 Human communications in industry affecting productivity. Residential course for executives.
13-24 The application of work study. Residential course for executives.

BURTON MANOR (Burton in Wirral, Cheshire)
26-31 Thinking, speaking, writing. Includes special session in speech therapy, where necessary.
26-31 Introduction to work study. Course organised in conjunction with the British Productivity Council.

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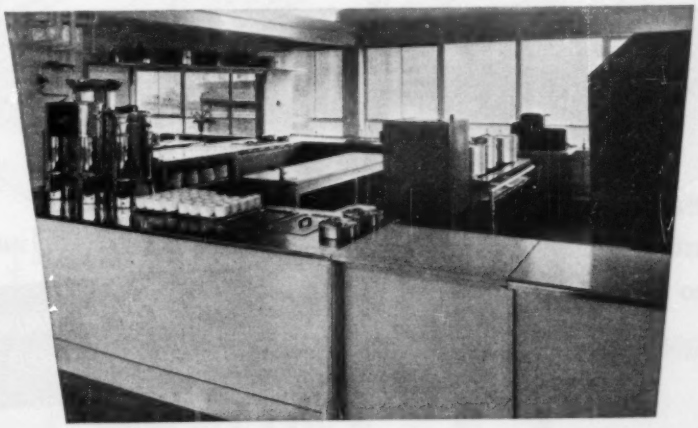

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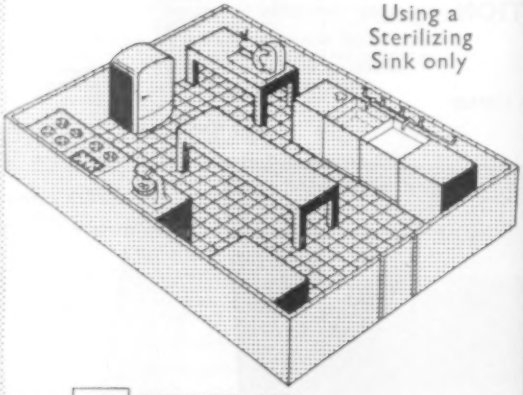

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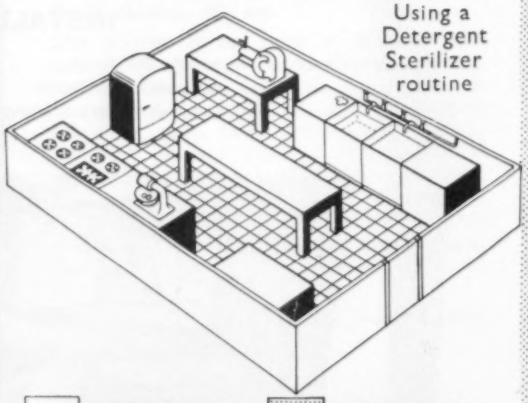

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EQUIPMENT MARKET

Safety

ISOLATES THE HAZARDS

AN aid to works managers and safety officers is Speedfix marking tape, for not only is it easily applied to factory floors at a cost per yard much below the cost of painting lines and the maintenance of such lines, but it can be removed when alternative transport lines or alleys are demanded.

The material is composed of a tough waterproof fabric impregnated with PVC and possesses great strength with a breaking strain of 60 lb. per inch width. It is printed in the safety colours yellow and black which run diagonally across the tape. The width

used generally is 2 in. wide but other widths can be obtained from the makers. This material can be printed in various other colour combinations to allow for its use in the indentification of pipe lines.

Industrial Tapes Ltd., Speedfix House, 142/146 Old Street, London, E.C.1.

FIREPROOF SOUND BARRIER

ESTIMATE of losses through fire damage in 1957 was around £25½ million so that the introduction of a fissured-mineral wool incombustible acoustic tile known as "Travertone" for office ceilings and walls is of wide interest.

It has been introduced in two sizes, 12 in. square x ¾ in. thick, or 12 in. x 24 in. x ¾ in. in thickness, and being naturally decorative—it is supplied with a white-painted surface which reflects the maximum light as well as saving decorator's finishing—is an ideal choice for reception rooms, showrooms, executives offices, boardrooms, etc.

The noise-absorption feature of "Travertone" is inherent in its composition and structure and its natural rock effect provides a decorative texture feature to the tiles. It also gives thermal insulation by tending to block the passage of heat.

"Travertone" also adheres easily and quickly to any firm, flat, dry surface including new brown coat plaster or gypsum lath and for lowered ceilings any form of mechanical suspension may be employed. Cleanliness can be maintained by simply sponging with a mild soap solution.

Inclusive cost of application and fixing approximately 5s. per square foot.

Armstrong Cork Company Ltd., Acoustics Department, Bush House, London, W.C.2.

TREAD SAFELY

THE James Walker organisation have introduced the new "Treadmaster" range of safety mat which incorporates the following advantages:

high coefficient of friction for non-slip top surface and skid-proof base;

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resistance to oils, grease and water to avoid contamination.

longitudinal, chamfered grooves, 3/16 in. deep for easy and effective sweeping; and

shock resisting to reduce damage to fragile objects which might be dropped.

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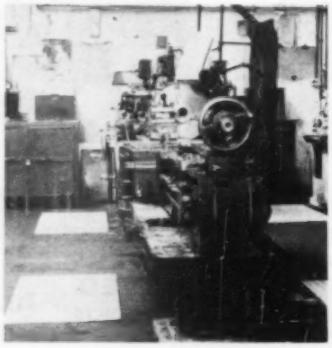

position, ⅝ in. in thickness, the mat in its basic form measures 4 ft. x 2 ft. By means of a unique joining device, however, they can be clipped together to form any length 2 ft. wide.

Another feature of the "Treadmaster" range is the variety of colours available to suit specific schemes. Six different shades are offered, which make it possible for the factory manager to equip his machine lines with individual colours. Alternatively, the mats can be supplied with inlaid letters or ciphers in contrasting colours.

James Walker Ltd., Lion Works, Woking Surrey.

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THIS new "Breathe Rite" spray mask can be used by anyone working with compressed air tools and

it is as effective against dust as it is against spray dust fumes.

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Office Aids

GUMMING SIMPLIFIED

THERE are three models in the recently introduced range of *Oyster Imp* label gumming machines. The model illustrated is the No. 1 hand-operated machine; over-all size is 11 in. deep, 10½ in. wide and 10 in. high. The other models are electrically operated. Both mounted on base boards with conveniently placed press button control, they are equipped with speed adjustment (by altering the gear ratio). In addition, No. 3 is fitted with a variable resistance which enables the motor speed to be varied as well.

These machines will automatically glue labels in sizes up to 6 in. square.

ONLY ONE PRACTICAL SOLUTION

It *seems* the kind of problem you can leave to the caretaker. But, in fact, your choice of toilet paper system can make a big difference to your overheads and your staff relations. It must meet many stringent requirements — hygiene, economy, easy installation, proof against pilfering. Only one toilet paper system passes all the tests — ONLIWON, the cabinet system that has been installed in industrial concerns and public institutions all over the country. In a neat, *locking* cabinet holding approx. 760 sheets, 5 in. x 5¾ in., Onliwon is the finest, purest tissue available. Write for samples and price list.

ONLIWON

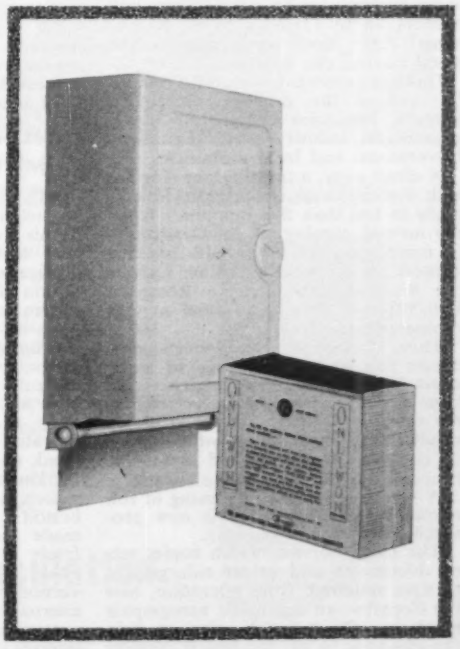
TOILET PAPER CABINET SYSTEM

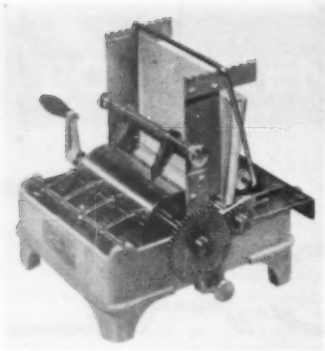
Among the larger users of the Onliwon System are:—
Aberthaw and Bristol Channel Portland Cement Co. Ltd • Aberthaw and Rhoose, Glam • British Sugar Corporation, London • British United Shoe Machinery Co. Ltd., Leicester • Ford Motor Works, Dagenham • Hackney Borough Council • Hoover (Washing Machines) Ltd., Merthyr Tydfil • Ransome and Marles Bearing Co. Ltd., Newark-on-Trent • The Metal Box Co. Ltd., London • Vauxhall Motors Ltd., Luton • The Steel Company of Wales and many others.

AND REMEMBER **ONLIWON** PAPER TOWELS

Strong and absorbent, these paper towels combine perfect hygiene with economy. In locking cabinet as for toilet paper, each packet holds 100 towels.

THE BRITISH PATENT PERFORATED PAPER CO. LTD.
HACKNEY WICK, LONDON, E.9
Telephone: AMHerst 4777 (5 lines)
Manufacturers of Bronco toilet rolls and packets





Special attachments are available for long or shaped labels. Operation is smooth and even, and adjustment of glue thickness is by two knurled screws.

Leon Davis & Co., Gummed Paper Tapes Division, 9 Laurence Pountney Lane, Cannon Street, London, E.C.4.

COPY SIZE BOOSTED

XEROGRAPHY moves up in size and considerably increases its scope with a new set of equipment—the Model 1318—introduced by Rank-XeroX Ltd.

Up to now, the largest direct copy—or offset litho master—which could be made by xerographic equipment, was 8½ in. x 13 in. (foolscap or Continental A4). This new equipment will, as its name suggests, make direct copies and masters up to 13 in. x 18 in. (Continental A3). Both paper masters and metal masters can be made.

This equipment is particularly suitable for use in the drawing office, for printers, insurance companies, banks, accountants, industry, music publishers, Government and local authorities.

A direct copy, a translucency (for use with dyeline) or an offset master can be made in less than five minutes. When the normal number of prints required is more than 10, the 1318 (making masters for an offset machine, such as the Multilith 2066 or the Rotaprint R30/90) will show substantial savings compared with dyeline.

Thus, xerographic equipment now covers the whole size range of small offset litho. Where an original is so large that reduction on to foolscap by the xerographic hand equipment would result in loss of detail, or where forms or circulars can be printed two-up or four-up, etc., the 1318 is the answer.

A new facility—the processing of roll microfilm before copying is now provided by the same company.

The Copy Service, which copies sets of documents and prints enlargement to sizes required, from microfilm, uses the Copyflo—an automatic xerographic machine. Rank-XeroX plan to help the customer to get the fastest possible service by this innovation. Any customer who does his own microfilming and needs a set of documents copied quickly can shoot them on microfilm and put the film straight into the post.

The Company will also undertake microfilming on behalf of their clients. By arrangement with H.M. Stationery Office, among the first to make use of the new facility is the Patent Office, which, at peak periods, is microfilming several thousand Patent Specifications a week. These include text, drawings, mathematical symbols, diagrams, graphs and wiring diagrams, and it is obviously prohibitively expensive to reprint them for the one or two copies needed. Therefore, each specification of which a copy is required is microfilmed, and the Copy Service collect the film daily.

At the Mortimer Street Laboratory, the film is processed, then put on to the

Copyflo machine. A 100 ft. film contains up to 800 frames, and the enlargements will take up to about 1,200 ft. of paper. As the Copyflo machine can turn out 1,200 ft. of copies an hour, there is no deal.

Rank-XeroX Ltd., 33-41 Mortimer St., London, W.1.

PUSH-BUTTON COMMUNICATION

THE "Ringmaster" loudspeaker telephone system being distributed in this country claims to set an entirely new standard for this type of communication by introducing a push-button dial panel on a loudspeaking system capable of 999 extensions. Two types of operation are available:

"Simplex" where the conversation is controlled by the person initiating the call—the person receiving the call does not touch his instrument and has only to answer. This control is operated by the "T" button (press to speak and release to listen).

"Duplex" operation eliminates the speech/listen function of the "T" button. After the connection has been made the conversation may be held freely at both ends without touching either instruments. This "Duplex" version provides a high speed electronic alternation without clipping either conversation. In addition, all "Duplex" operated units are equipped with the "Simplex" "T" button, in order that manual operation may be used when it is desirable to control a conversation, or when an extreme disparity in noise levels would tend to unbalance the electronic control of the amplifiers.

There are basically two systems, group and co-ordinate selectors. The maximum build-up on the former is 50 units, on the latter 999. Both systems are fully inter-communicating, but whereas the amplifiers are automatically selected in the latter, in the former they are allocated one to each group.

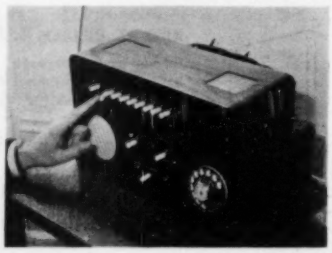
The "Ringmaster" telephone unit is considerably smaller than that of a conventional system and employs a push-button panel instead of a dial for the numerical combinations. The normal unit as supplied is of the loudspeaking type (but can be fitted with the conventional type hand set which, when lifted, automatically disconnects the loudspeaker). In addition to the numbered buttons, the unit is equipped with a "T" button which performs the dual function of "Simplex" control and energising the amplifier. There is also an "X" button which is used for clearing the connection on termination of the conversation and refusing an inconvenient call. Two lamps are located on the unit—the "red" lamp indicating when all channels are engaged and the "green," that the unit is being called. In addition, there is a short call signal. The amplifiers used ensure a very high standard of reproduction and include band limiting filters enabling the equipment to be used in noisy surrounds. There is an automatic H.T. cut out on the amplifiers which are not in use at any given moment.

Auxiliary (or sub) units are available with various sizes of loudspeakers. They are not normally able to initiate calls, but where it is necessary it can be arranged for auxiliary units to initiate calls to one or two other units. In common with the standard units, the output of these auxiliaries is approximately ½ watt.

EMI Sales & Service Ltd., Hayes, Middlesex.

CONFERENCE BY PHONE

THIS new loudspeaking telephone is known as the "Automaster." It is housed in a polished walnut cabinet, and provides all the facilities that a



SUGAR CANE FIBRES *from the British Commonwealth*

Look at cane fibres under a microscope. See how amazingly long they are. During manufacture these fibres interlock and interweave to give Celotex Insulation Board unique strength and durability.

Most ordinary insulation boards are made from short vegetable fibres. No doubt about it, the long cane fibre is tough, naturally resistant to rot and you find it ONLY in Celotex CANE FIBRE INSULATION BOARD.

Here is an Insulating Board . . . a superb Board . . . at a competitive price PLUS good delivery, constant high quality and a unique after sales technical service. That's CELOTEX CANE FIBRE INSULATION.

Ask for it by name and if you need technical advice, without obligation, it's yours for the asking—from the Celotex Technical Advisory Service.

Sugar Cane Fibre under a microscope. See how long the tough fibres are.

CELOTEX REGD TRADE MARK **cane fibre insulation**

CELOTEX LIMITED, North Circular Road, Stonebridge Park, London, N.W.10 Telephone: ELGar 5717 (10 lines)

busy executive requires—in the one compact unit.

By employing some of the latest printed circuit techniques, engineers have succeeded in attaining a standard of performance claimed to be superior to anything that has previously been possible. A highly sensitive microphone ensures that even from considerable distances it is possible to carry on a perfectly normal conversation.

If more than one "Automaster" is installed on the telephone system, loud-to-loud conversations can be carried on without any difficulty. A three-position volume key enables the sound level to be adjusted to meet the requirements of the user at any time. When required, conversations can be held in private by using a handset provided at the back of the instrument which automatically disconnects the loudspeaker when lifted.

Among the novel features of the "Automaster" is "Time-on-the-dial," which ensures that a handy time check is always available without taking up any additional desk space.

Other facilities that are catered for include the *Key Calling* service. By depressing one key only the user may call any one of twenty predetermined extensions. Depression of the appropriate key automatically switches on the loudspeaker and calls the required extension, even if the line is engaged at the time. A pilot light reminds the user that the instrument is switched on. It is also possible to communicate with another extension by dialling while a key-calling individual is "holding on."

A *Conference* service enables the user to call and speak simultaneously to a predetermined group of up to twenty individuals. Part-time members of the telephone conference can be "brought in" or "dismissed" as required. Much time can thus be saved in discussing important matters without the necessity of summoning the persons involved to an executive's office.

The *Secretarial Service* enables the user to receive all calls direct, and have facilities for switching his line through to a secretary; or, alternatively, to have all incoming calls filtered by a secretary before they are passed on to him. Several alternative facilities can be provided by this service.

Communication Systems Ltd., Norfolk House, Norfolk Street, London, W.C.2.

AT-A-GLANCE DIRECTORY

This simple device is for holding a list of most-used telephone numbers. It is made of aluminium in black stove enamel finish and is easily fitted with the aid of a screwdriver. The Perspex-covered frame, measuring 8 in. x 5 in., will accommodate up to 80 names and numbers. It costs 14/6d. and is marketed by Communication Systems Ltd., Norfolk House, Norfolk Street, London, W.C.2.

Heating

EASY-TO-FEED BOILER

A COKE-FIRED boiler which is widely used on the Continent for central heating and hot water supplies in large buildings has now been introduced to this country. Made by Bronswerk N.V. of Holland, it is to be known in Britain as the *Redfyre Emma*. It is said to be of unique design and exceptionally high thermal efficiency, and a special feature is its secondary combustion chamber; it is in effect a

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The skilled staff you want read the DAILY HERALD, which numbers over 3,000,000 skilled workers among its total readership of 5,744,000. That's why a classified advertisement in the HERALD is the quick, easy, and economical way of solving your staffing problems. For immediate insertion ring TEMple Bar 1200 (ext. 453/8) or Manchester Central 3232 (ext. 75).

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DAILY HERALD

CLASSIFIED ADVERTISEMENT MANAGER, DAILY HERALD, Acre House, Long Acre, London, W.C.2, or 2/4 Oxford Road, Manchester, 1.

gas producer as well as a boiler. Thermal efficiency is claimed to be around 85-90 per cent, achieving a saving of 20-25 per cent in fuel costs when compared with the ordinary type of coke boiler.

It should be especially welcome here since it burns many varieties of coke, including the large size (up to 4 in.) which is in more than ample supply from the British gas undertakings.

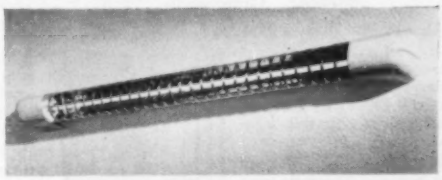
Coke is stored in a large hopper and gravity fed into the fire zone through which primary air is passed horizontally. The gas produced passes into a combustion chamber into which preheated secondary air is admitted, ensuring complete combustion. From there the products of combustion pass through a heat exchanger on their way to the chimney.

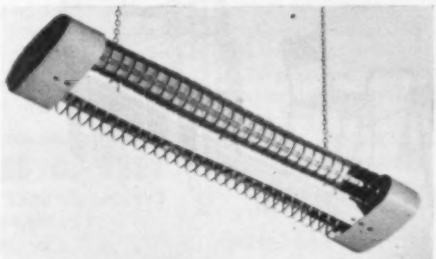
Automatic temperature control operates within close limits and the boiler can be raised from low to full load in a short time. The boiler requires little attention: it will operate for eight hours under full load conditions, for 18-20 hours at half-load, and up to 48 hours on low load conditions, without supervision. It is compact and can be sited at ground level, in a cellar, or in an existing boiler house. It can be used with varying types of mechanical coke handling applicances, or can be charged manually.

Also by the same firm is a new underfloor air-feed fire with a neat resistant 30 per cent chrome steel bottom grate, reversible for coal or coke, a robust mild steel ashcan which should only need emptying twice a week; an accurate control lever to regulate the rate of burning and a deepening bar (removable) for building up an extra deep fire. Name: the Hearth Redfyre; price £9 5s.

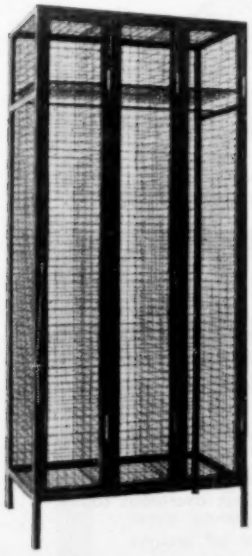
Newton Chambers & Co. Ltd., Thorncliffe, near Sheffield.

RADIANT HEATING FOR OFFICE AND FACTORY





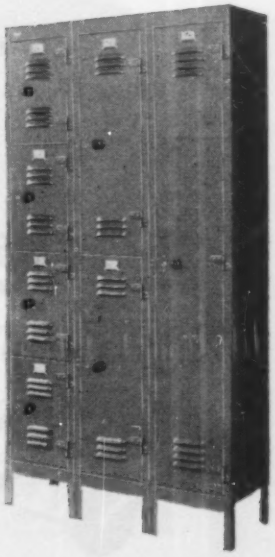
The new Ekco 'Firestreak' (top illustration) is a high-level wall heater for the domestic market, designed with the accent on clean, effective and comfortable heating. But it has an obvious application in the small office. The FS75's output is 750 watts and the single chrome reflector is adjustable within a wide angle. Dimensions are: 28 in. long, 2 in. high, 3 in. deep, and it costs £4 9s. For general industrial heating there is the 'Twinstreak' (FST), which has twin chromium reflectors with individual adjustment to beam heat in any required direction. The same length as the 'Firestreak', this model has an output of 1½ kW. It is easily serviced, the end caps are in cream only, and the price is £7 15s. —E. K. Cole Ltd., 5 Vigo Street, London, W.1.



An Important Amenity

Friction between employees and confusion at going-home time may be avoided by providing separate receptacles for clothes and personal belongings. Such provision is also important in the interest of hygiene. 'Harco' Clothes Lockers provide the answer. They are made in sheet metal or wirework, in nests of up to five in one unit, with short or full-length compartments as required.

Steel lockers are fitted with 6-lever locks which can differ up to 1,600, wirework lockers carry hasps and fasteners for padlocks. Height of both types is 72 in.



'HARCO' CLOTHES LOCKERS

IN WIREWORK OR SHEET METAL

Please ask for Lists Nos. PMT 960 and 1009

G. A. HARVEY & CO. (LONDON) LTD.

Woolwich Road, London, S.E.7 GREenwich 3232 (22 lines)

Harvey

Welfare

STACKS OF USES

IF your works canteen has to serve as an evening meeting place for your works social club, these *Hostess* trestle/stack tables may well be what you have been looking for—to make the regular changeover a quicker and less trouble-making operation.

As for their work-time function, your canteen customers will find them no less comfortable than the conventional table. There is no need, say the makers, for the diner to sit straddled-legged, because the trestles are designed to accommodate his knees. In fact, they add, the trestles are so spaced that eight people can sit at one table in comfort.

In addition, the whole structure is designed to be firm and rigid: the table top is secured to the tubular steel trestle by means of a simple turn button. As the illustration shows, the trestle can be stacked when not in use, and the light-weight tops can be stored away in the normal fashion.

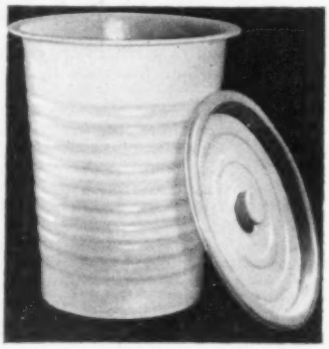
Their simplicity of erection together with their other advantages, will suggest more uses than those given above, but for canteen purposes the table tops are conveniently covered in Formica, or other decorative plastics: they are also obtainable in plain blockboard or line-covered. Dimensions: 72 in. x 24 in.; or 72 in. x 27 in. Cost is claimed to be 25 per cent less than usual Formica-covered tables; *there is no purchase tax.*

Hostess Tubular Equipment Ltd., Vulcan Road, Bilston, Staffs.

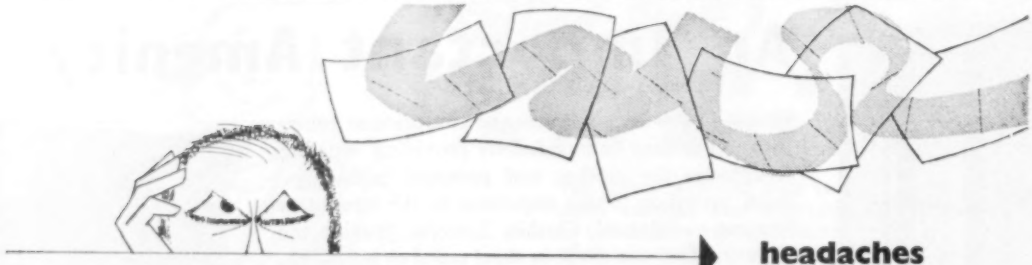
Hostess tables—quick-change comfort

Efficiency Aids

EASY-TO-CLEAN BINS



This Engel polythene container is one of a range of 15-gallon industrial waste bins made by White, Child & Beney Ltd., of Shepley Works, Audenshaw, nr. Manchester. They are 23½ in. deep, 20 in. top diameter and 14 in. base, tapered to nest, and will also stack with lids fitted.

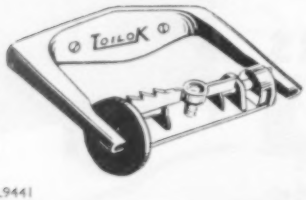


headaches over paper wastage?

TOILOK
REGD TRADE MARK

Pat. No. 643103 Regd. Des. 858877

TOILET ROLL HOLDER



Stop it! Control usage with the Toilok Toilet Roll Holder. Its installation makes an effective contribution to economy. This *clever* equipment yields *one piece of paper at a time* and " locks " next release until wanted. Toilok Toilet Roll Holder is pilfer-proof; strongly made and supplied in white, cream or pastel green hard gloss enamel. Takes every good brand of toilet roll, but we recommend Toilok Medicated 7-oz. rolls. Take the Toilok step to reduce overheads today.

Write for illustrated folder and full details to:

R. SCULTHORP & CO. LTD

(DEPT. T.5) BLACKFRIARS HOUSE, NEW BRIDGE STREET
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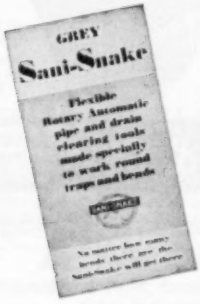
L9441

Keep plumbing clear

REMOVED by the "Sani-Snake" after all attempts by other means had failed.



One blocked waste pipe may cost you anything from £10 to over £100 for excavation or dismantling. A "Sani-Snake" will cost you £10 or less and will eliminate the necessity for such costly work. A very large number of famous manufacturing firms and departmental stores are daily using the "Sani-Snake.

The equipment reduces the clearance of pipes to the simple job of turning a handle. Any member of the maintenance staff can use it. There is work for a "Sani-Snake" wherever pipes are in use.

Write for free explanatory illustrated folder and price list.

Licensee and Manufacturer

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FIBRE-GLASS INDUSTRIAL SAFETY HELMET

The new improved **F/11** model illustrated is the result of intensive experiment and research. Lightweight yet capable of withstanding a 40 lb. drop impact test, it gives maximum protection against injury from falling objects for workers engaged in mining, quarrying, shipbuilding, structural engineering and similar occupations.

Caps them all

Industrial and Safety Officers and all concerned with the purchase of protective headwear are invited to write for full details to:—

The fibre-glass shell has moulded-in supports for lamp brackets.

Cradle has fixed P.V.C. coated nylon webbing and fully adjustable headband.

HELMETS LIMITED, WHEATHAMPSTEAD, HERTS

Wheathampstead 2221/3

Dermatitis accounts for over 50% of lost 'man hours'!

The Annual Report of the Chief Inspector of Factories shows that dermatitis accounts for more than half the time lost because of occupational disease by those in insurable employment. Yet dermatitis can be controlled by using the appropriate Rozalex Barrier Cream for the work involved. These barrier creams have been accepted as the standard preparations for over 25 years by those concerned with occupational health. The severity of the skin risk varies with the trade, but in all occupations there is a need for protection and cleanliness. Full technical resources are available on request to Rozalex Ltd., 10 Norfolk Street, Manchester 2.

Protect hands with

ROZALEX BARRIER CREAMS

R112A

like Bennett's Industrial Gloves its Foremost aim is

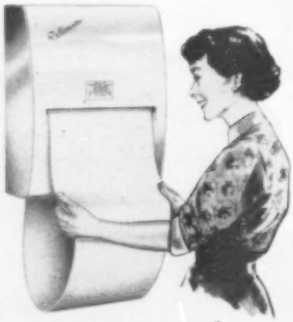
Perfection in Protection

H. G. BENNETT & CO. GLOVES LTD.

INDUSTRIAL GLOVE SPECIALISTS

LIVERPOOL 23

Towel Trouble ?



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Installed FREE, with towel hire and laundry service

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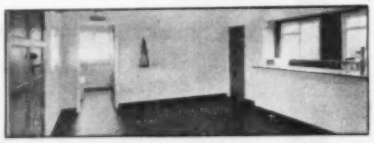
choose PEEL'S first-to last



for a Peel Pavilion is the permanent answer to all your accommodation problems — Sports **and** social—providing ample changing facilities for both home and visiting teams, and a pleasant, well-lit hall for entertainment. (If required, special thermal linings can be supplied to give extra warmth).

Solidly built from NEW timber, PEEL Pavilions are available in standard designs, or can be built to suit individual requirements. Our design team is at your service.

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Send for the complete catalogue and price list, or ask our Representative to call.

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Sectional BUILDINGS

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MARTINDALE

PROTECTIVE MASKS

Patent No. 479,807
Registered Design No. 819,509

Protect your workers adequately from dust and mist inhalation. Light and comfortable. Fit everybody perfectly. Weight ¼ oz. Allow free breathing, clear vision, use of goggles, free speech. The workers will wear them whether watched or not. Reduce absenteeism. Do not cause perspiration or skin irritation. Always clean because pad is easily replaced.

Send 3/3 for mask and 6 refills (trial sample)

NEW REFILL DISPENSER PACK

Positively saves wastage and spoilage of Filter Pads.

Our refill pack of 25 Filter Pads has now been completely redesigned so that it can be *resealed* as each pad is extracted and used. The new hygienic method of packing ensures that *all* the pads are usable and no wastage can occur. Be sure to secure *genuine* Martindale Pads—they cost no more, are more efficient and in the new pack show a great advantage in cost.

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also at 25 Elmbank Street, Glasgow, C.2

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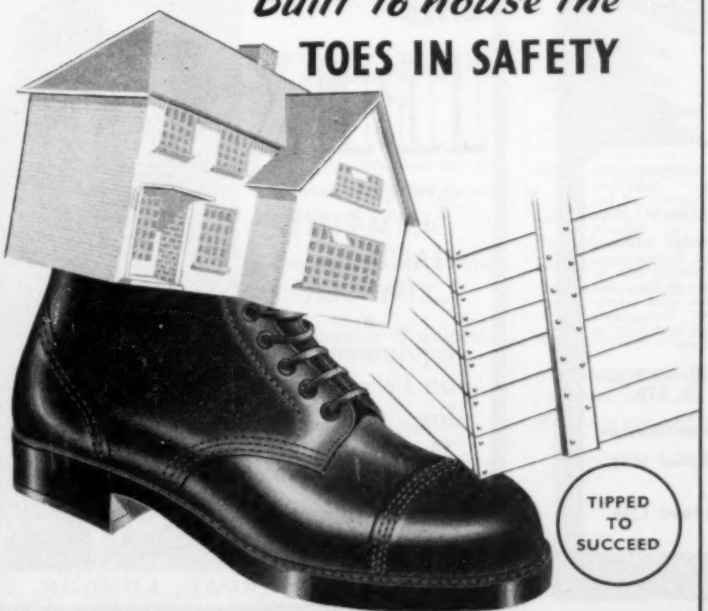
THE ***Rely-a-Bell***

BURGLAR AND FIRE ALARM CO. LTD.
54 WILSON STREET, LONDON, E.C.2

Built to house the TOES IN SAFETY



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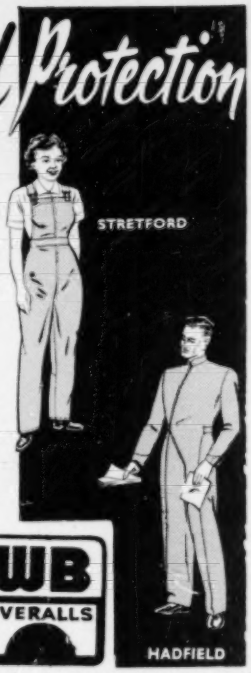

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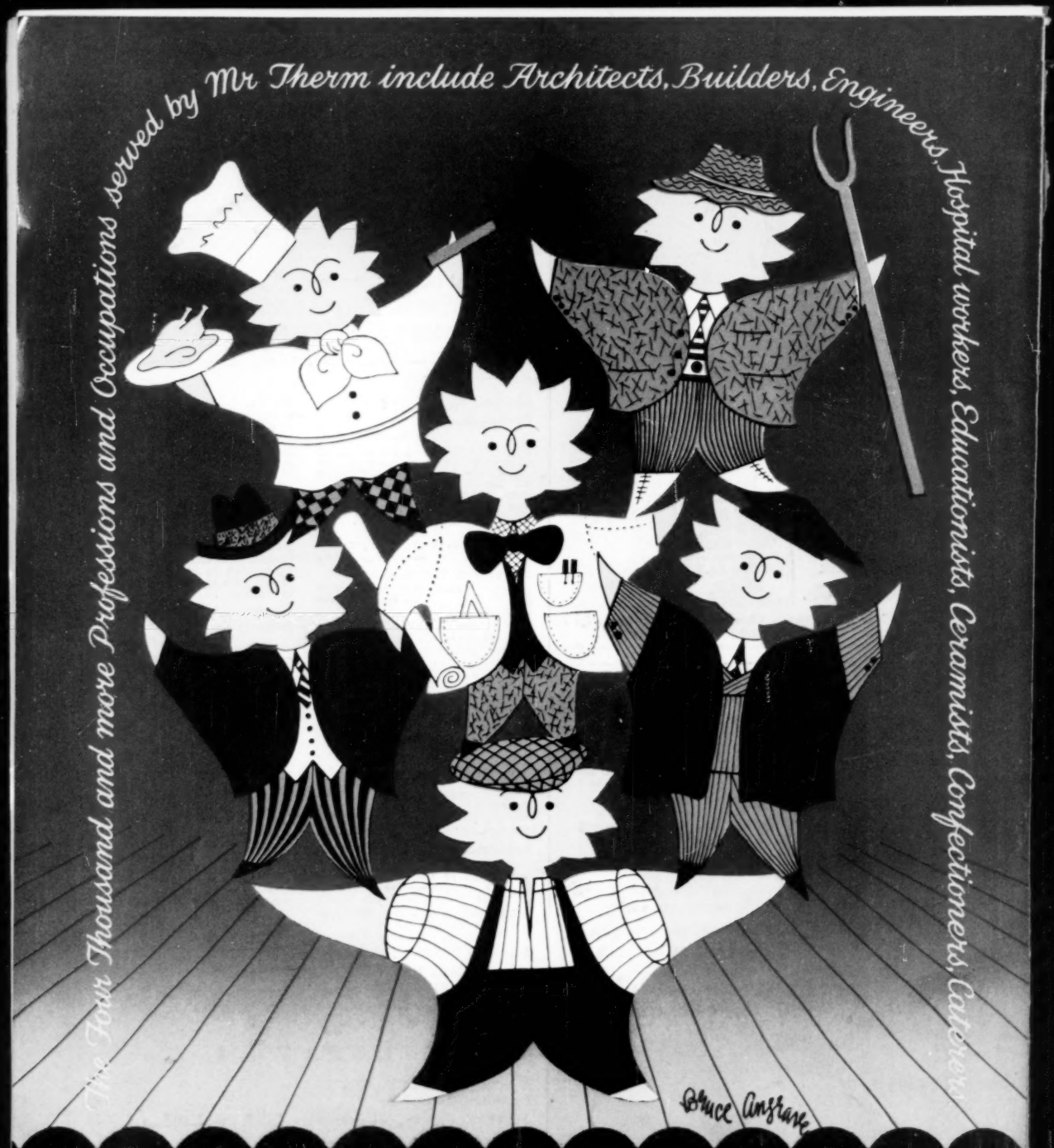
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